

DSC-T3

SERVICE MANUAL

Ver 1.2 2005.09

Revision History



LEVEL 1

DSC-T3

*US Model
Canadian Model
AEP Model
UK Model
E Model
Hong Kong Model
Australian Model
Chinese Model
Japanese Model
Korea Model
Tourist Model*

Link

• SPECIFICATIONS

• ACCESSORIES

• SELF DIAGNOSIS FUNCTION

- INSTRUCTION MANUAL is shown at the end of this document.

DIGITAL STILL CAMERA

SONY®



Cyber-shot
Digital Still Camera



SPECIFICATIONS

■ Camera

[System]

Image device

7.66 mm (1/2.4 type) color CCD
Primary color filter

Total pixels number of camera

Approx. 5 255 000 pixels

Effective pixels number of camera

Approx. 5 090 000 pixels

Lens

Carl Zeiss Vario-Tessar
3 × zoom lens
f = 6.7 – 20.1 mm ((38 – 114 mm
when converted to a 35 mm still
camera)
F3.5 – 4.4

Exposure control

Automatic exposure, Scene selection
(9 modes)

White balance

Automatic, Daylight, Cloudy,
Fluorescent, Incandescent, Flash

File format (DCF compliant)

Still images: Exif Ver.2.2 JPEG
compliant, DPOF compatible
Movies: MPEG1 compliant
(Monaural)

Recording media

“Memory Stick Duo”

Flash

Recommended distance (ISO set to
Auto):
0.1 m to 1.7 m (4 inches to 5 feet
6 7/8 inches)
0.5 m to 1.6 m (1 foot 7 3/4 inches to
5 feet 2 7/8 inches)

[Input and Output connectors]

Multi connector

USB communication

Hi-Speed USB (USB 2.0 compliant)

[LCD screen]

LCD panel

6.2 cm (2.5 type) TFT drive

Total number of dots

230 400 (960×240) dots

[Power, general]

Used battery pack

NP-FT1

Power requirements

3.6 V

Power consumption (during shooting)

1.4 W

Operating temperature

0°C to +40°C (+32°F to +104°F)

Storage temperature

–20°C to +60°C (–4°F to +140°F)

Dimensions

Approx. 91×60×17.8 mm
(3 5/8×2 3/8×2 3/32 inches) (W/H/D,
excluding maximum protrusions)

Mass

Approx. 171 g (6.0 oz) (including
battery pack NP-FT1, “Memory
Stick Duo” and wrist strap)

Microphone

Electret condenser microphone

Speaker

Dynamic speaker

Exif Print

Compatible

PRINT Image Matching II

Compatible

PictBridge

Compatible

■ UC-TC Cyber-shot Station

[Input and Output connectors]

A/V OUT (MONO) jack (Monaural)

Minijack

Video: 1 V_{p-p}, 75Ω, unbalanced,
sync negative

Audio: 327 mV (at a 47 kΩ load)
Output impedance 1 kΩ

USB jack B

USB connection

High-Speed USB
(USB 2.0 High-Speed compatible)

DC IN jack

Camera connector

■ AC-LM5/LM5A AC Adaptor

Input rating

100 V to 240 V AC,
50/60 Hz, 0.16 A to 0.09 A

AC-LM5

10 W

AC-LM5A

11 W

Output rating

4.2 V DC, 1.5 A

Operating temperature

0°C to +40°C (+32°F to +104°F)

Storage temperature

–20°C to +60°C (–4°F to +140°F)

Dimensions

AC-LM5

Approx. 47×30×80 mm
(1 7/8×1 3/16×3 1/4 inches)

AC-LM5A

Approx. 48×29×81 mm
(1 15/16×1 3/16×3 1/4 inches)
(W/H/D, excluding projecting parts)

Mass

AC-LM5

Approx. 170 g (6.0 oz)

AC-LM5A

Approx. 160 g (5.6 oz)
excluding power cord (mains lead)

■ NP-FT1 battery pack

Used battery

Lithium-ion battery

Maximum voltage

DC 4.2 V

Nominal voltage

DC 3.6 V

Capacity

2.4 Wh (680 mAh)

■ Accessories

- AC-LM5/LM5A AC Adaptor (1)
- Power cord (mains lead) (1)
- NP-FT1 battery pack (1)
- Cyber-shot Station UC-TC (1)
- Tripod camera holder (1)
- USB cable (1)
- A/V connecting cable (1)
- Wrist strap (1)
- “Memory Stick Duo” (32 MB) (1)
- Memory Stick Duo Adaptor (1)
- CD-ROM (USB driver SPVD-012) (1)
- Operating instructions (1)



Design and specifications are subject to change
without notice.

SAFETY CHECK-OUT


After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
 - Keep the temperature of the soldering iron around 270°C during repairing.
 - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
 - Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

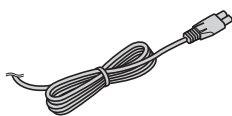
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

CAUTION :

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

Checking supplied accessories.

Make sure that the following accessories are supplied with your camcorder.



Power cord (Main lead) (1)
(AEP, E model)

△ 1-769-608-11

Power cord (Main lead) (1)
(KR model)

△ 1-776-985-11

Power cord (Main lead) (1)
(CH model)

△ 1-782-476-13

Power cord (Main lead) (1)
(UK, HK model)

△ 1-783-374-11

Power cord (Main lead) (1)
(US, CND model)

△ 1-790-107-22

Power cord (Main lead) (1)
(JE model)

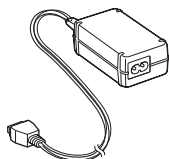
△ 1-790-732-12

Power cord (Main lead) (1)
(J model)

△ 1-791-637-13

Power cord (Main lead) (1)
(AUS model)

△ 1-827-945-11



AC-LM5 AC Adaptor (1)
(Except US, CND, J model)

△ 1-477-488-12

AC-LM5 AC Adaptor (1)
(US, CND, J model)

△ 1-477-488-21

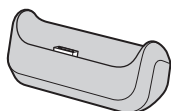


CD-ROM
(USB Driver SPVD-012.1 (CL)) (1)
(US, CND, J model)

2-187-477-01

CD-ROM
(USB Driver SPVD-012.1 (C)) (1)
(Except US, CND, J model)

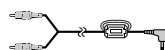
2-187-478-01



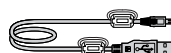
Cyber-shot station (UC-TC) (1)
1-818-878-11



Tripod camera holder (1)
2-187-260-01



A/V connecting cable (1)
1-824-111-11



USB cable (1)
1-827-754-11

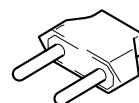


Wrist strap (SILVER) (1)

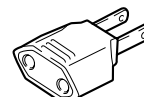
2-050-981-01

Wrist strap (BLACK) (1)

2-050-981-11



2-pin conversion adaptor (1)
(JE model)
1-569-007-12



2-pin conversion adaptor (1)
(E model)
1-569-008-21

• Abbreviation

- CND : Canadian model
- AUS : Australian model
- CH : Chinese model
- HK : Hong Kong model
- KR : Korea model
- JE : Tourist model
- J : Japanese model

Other accessories

- 2-186-580-01 MANUAL, INSTRUCTION (JAPANESE)(J)
- 2-186-580-11 MANUAL, INSTRUCTION (ENGLISH)(EXCEPT KR, J)
- 2-186-580-21 MANUAL, INSTRUCTION (FRENCH/ITALIAN)(CND, AEP)
- 2-186-580-31 MANUAL, INSTRUCTION (SPANISH/PORTUGUESE)
(AEP, E, JE)
- 2-186-580-41 MANUAL, INSTRUCTION (GERMAN/DUTCH)(AEP)

- 2-186-580-51 MANUAL, INSTRUCTION (CHINESE)(E, HE, CH, JE)
- 2-186-580-61 MANUAL, INSTRUCTION (RUSSIAN/SWEDISH)(AEP)
- 2-186-580-71 MANUAL, INSTRUCTION (ARABIC)(E)
- 2-186-580-81 MANUAL, INSTRUCTION (KOREAN)(JE, KR)
- 2-186-580-91 MANUAL, INSTRUCTION (POLISH/CZECH)(AEP)

- 2-186-581-11 MANUAL, INSTRUCTION (HUNGARIAN/SLOVAK)(AEP)
- 2-186-582-01 MANUAL, INSTRUCTION (for PC)(JAPANESE)(J)

Note :

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note :

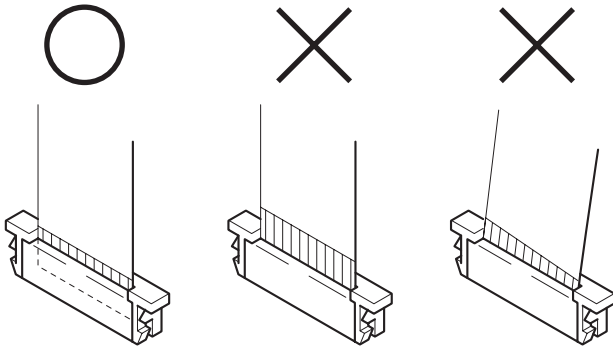
Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SELF-DIAGNOSIS FUNCTION

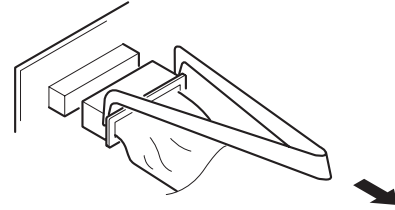
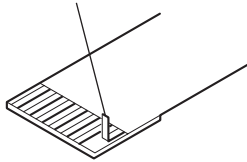
• NOTE FOR REPAIR

Make sure that the flat cable and flexible board are not cracked or bent at the terminal.
Do not insert the cable insufficiently nor crookedly.

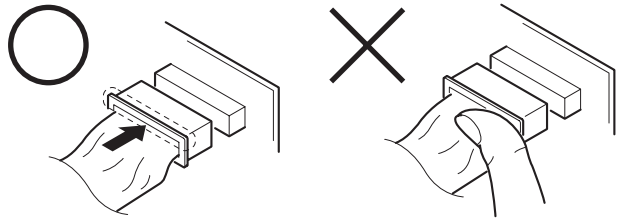
When remove a connector, don't pull at wire of connector.
Be in danger of the snapping of a wire.



Cut and remove the part of gilt which comes off at the point.
(Take care that there are some pieces of gilt left inside)



When installing a connector, don't press down at wire of connector.
Be in danger of the snapping of a wire.



[Discharging of the FLASH unit's charging capacitor]

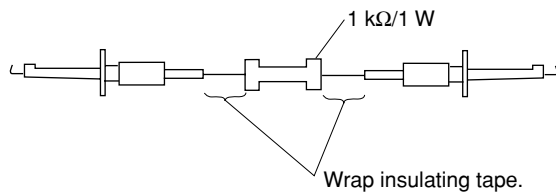
The charging capacitor of the FLASH unit is charged up to the maximum 300 V potential.

There is a danger of electric shock by this high voltage when the capacitor is handled by hand. The electric shock is caused by the charged voltage which is kept without discharging when the main power of the DSC-T3 is simply turned off. Therefore, the remaining voltage must be discharged as described below.

Preparing the Short Jig

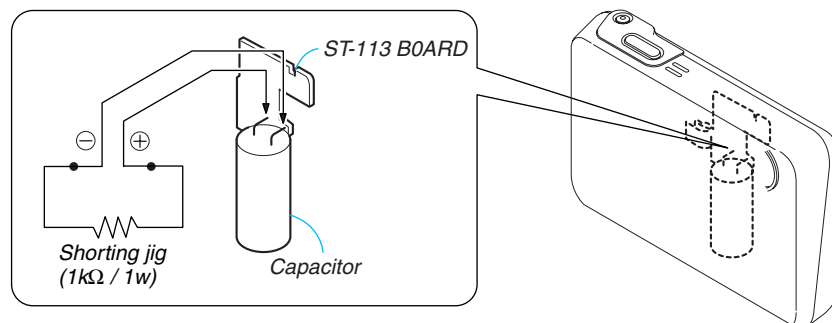
To preparing the short jig, a small clip is attached to each end of a resistor of 1 k Ω / 1 W (1-215-869-11)

Wrap insulating tape fully around the leads of the resistor to prevent electrical shock.



Discharging the Capacitor

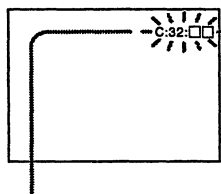
Short circuits between the positive and the negative terminals of charged capacitor with the short jig about 10 seconds.



[Description on Self-diagnosis Display]

Self-diagnosis display

The camera has a self-diagnosis display. This function displays the camera condition with five-digits (a combination of a letter and figures) on the LCD screen. If this occurs check the following code chart. The five-digits display informs you of the camera's current condition. The last two digits (indicated by □□) will differ depending on the state of the camera.



Self-diagnosis display

- C: □□: □□
The contents which can be handled by customer, are displayed.
- E: □□: □□
The contents which can be handled by engineer, are displayed.

Display Code	Countermeasure	Cause	Caution Display During Error
C:32:01	Turn off the main power then back on.	Trouble with hardware.	SYSTEM ERROR
C:13:01	Replace the memory stick. Format the memory stick with the DSC-T3.	<ul style="list-style-type: none"> • The type of memory stick that cannot be used by this machine, is inserted. • Data is damaged. • Unformatted memory stick is inserted. 	MS ERROR

Note: Add the sentence as follows.
If other codes are displayed, service is required.
Please send the set to a specialized center.

SONY®

Digital Still Camera

Operating Instructions

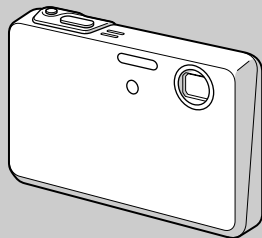
Before operating the unit, please read this manual thoroughly, and retain it for future reference.

Owner's Record

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. DSC-T3

Serial No. _____



DSC-T3

Cyber-shot



MEMORY STICK™



InfoLITHIUM™



TYPE

2-186-580-11 (1)

Getting started _____

Shooting still images _____

Viewing still images _____

Deleting still images _____

Before advanced operations _____

Advanced still image shooting _____

Advanced still image viewing _____

Still image printing _____

Enjoying movies _____

Enjoying images on your computer _____

Troubleshooting _____

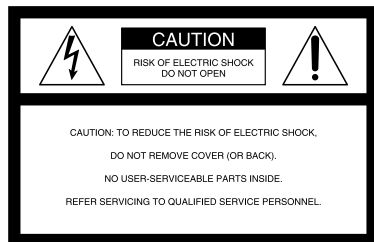
Additional information _____

Index _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

For the Customers in the U.S.A.



This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

If you have any questions about this product, you may call:

Sony Customer Information Services Center
1-800-222-SONY (7669)

The number below is for the FCC related matters only.

Regulatory Information

Declaration of Conformity

Trade Name: SONY
Model No.: DSC-T3
Responsible Party: Sony Electronics Inc.
Address: 16450 W. Bernardo Dr,
San Diego, CA 92127
U.S.A.
Telephone No.: 858-942-2230

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

Model DSC-T3 is to be used with the Cyber-shot Station Model UC-TC and AC Adaptor Model AC-LM5/AC-LM5A.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The supplied interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For the Customers in the U.S.A. and Canada

RECYCLING LITHIUM-ION BATTERIES

Lithium-Ion batteries are recyclable.

You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.



For more information regarding recycling of rechargeable batteries, call toll free 1-800-822-8837, or visit <http://www.rbrc.org/>

Caution: Do not handle damaged or leaking Lithium-Ion batteries.

For the customers in the United Kingdom

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a fuse of the same rating as the supplied one and approved by ASTA or BSI to BS 1362, (i.e., marked with ⚡ or ⚡ mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

Attention for the Customers in Europe

This product has been tested and found compliant with the limits sets out in the EMC Directive for using connection cables shorter than 3 meters (9.8 feet).

Attention

The electromagnetic field at the specific frequencies may influence the picture and sound of this camera.

Notice

If static electricity or electromagnetism causes data transfer to discontinue midway (fail), restart the application or disconnect and connect the USB cable again.

"Memory Stick"



For the Customers in the U.S.A. and Canada

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.
THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

Notice

Certain countries and regions may regulate disposal of the battery used to power this product. Please consult with your local authority.

Read this first

Trial recording

Before you record one-time events, you may want to make a trial recording to make sure that the camera is working correctly.

No compensation for contents of the recording

Contents of the recording cannot be compensated for if recording or playback is not possible due to a malfunction of your camera or recording media, etc.

Back up recommendation

To avoid the potential risk of data loss, always copy (back up) data to a disk.

Notes on image data compatibility

- This camera conforms with the Design rule for Camera File system universal standard established by the JEITA (Japan Electronics and Information Technology Industries Association).
- Playback of images recorded with your camera on other equipment and playback of images recorded or edited with other equipment on your camera are not guaranteed.

Precaution on copyright

Television programs, films, video tapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provision of the copyright laws.

Do not shake or strike the camera

In addition to malfunctions and inability to record images, this may render the "Memory Stick Duo" unusable or image data breakdown, damage or loss may occur.

LCD screen, LCD finder (only models with an LCD finder) and lens

- The LCD screen and the LCD finder are manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, there may be some tiny black points and/or bright points (white, red, blue or green in color) that constantly appear on the LCD screen and the LCD finder. These points are normal in the manufacturing process and do not affect the recording in any way.
- Be careful when placing the camera near a window or outdoors. Exposing the LCD screen, the finder or the lens to direct sunlight for long periods may cause malfunctions.
- Do not press the LCD screen hardily. The screen may be uneven and that may cause a malfunction.
- Images may be trailed on the LCD screen in a cold location. This is not a malfunction.

Clean the flash surface before use

The heat of flash emission may cause dirt on the flash surface to become discolored or to stick to the flash surface, resulting in insufficient light emission.

Do not get the camera wet

When taking pictures outdoors in the rain or under similar conditions, be careful not to get the camera wet. Water entering the inside of the camera may cause malfunctions which in some cases may not be repairable. If moisture condensation occurs, see page 128 and follow the instructions on how to remove it before using the camera.

Do not expose the camera to sand or dust

Using the camera in sandy or dusty locations may cause malfunction.

Do not aim the camera at the sun or other bright light

This may cause irrecoverable damage to your eyes. Or it may cause the malfunction of your camera.

Notes on the camera locations

Do not use the camera near a location that generates strong radio wave or emits radiation. The camera may not be able to record or play back properly.

Carl Zeiss lens

This camera is equipped with a Carl Zeiss lens which is capable of reproducing sharp images with excellent contrast.

The lens for this camera has been produced under a quality assurance system certified by Carl Zeiss in accordance with the quality standards of Carl Zeiss in Germany.

The pictures used in this manual

The photographs used as examples of pictures in this manual are reproduced images, and are not actual images shot using this camera.

Before using your camera

“Memory Stick” compatible with this camera

The IC recording medium used with this camera is the “Memory Stick Duo”. There are two sizes of “Memory Stick”. Choose the “Memory Stick” size that matches your camera.

“Memory Stick Duo” (Size used with this camera)



“Memory Stick”



- For details on the “Memory Stick Duo”, see page 128.
- “Memory Stick PRO” and “Memory Stick PRO Duo” can be used only with “Memory Stick PRO” compatible equipment.
- For the number of images that can be saved using this camera, see page 28 or 119.

When using a “Memory Stick Duo” with “Memory Stick” compatible equipment

Be sure to insert the “Memory Stick Duo” into the supplied Memory Stick Duo Adaptor.

Memory Stick Duo Adaptor



On “InfoLITHIUM” battery pack

When using the battery pack for the first time

Be sure to charge the supplied NP-FT1 battery pack (page 14).

Recharging

The battery pack can be charged even when it has not been completely discharged. In addition, the battery pack can be used even if it has only been charged partway.

Extending the battery pack life

When not using the camera for a long time, turn off the camera, remove the battery pack and store it in a dry, cool place to maintain the battery pack functions (page 130).

- For details on “InfoLITHIUM” battery pack, see page 130.

Trademarks


- **Cyber-shot** is a trademark of Sony Corporation.
- “Memory Stick”,  “Memory Stick PRO”, **MEMORY STICK PRO**, “Memory Stick Duo”, **MEMORY STICK DUO**, “Memory Stick PRO Duo”, **MEMORY STICK PRO DUO**, “MagicGate” and **MAGIC GATE** are trademarks of Sony Corporation.
- “InfoLITHIUM” is a trademark of Sony Corporation.
- Picture Package is a trademark of Sony Corporation.
- Microsoft, Windows, WindowsMedia, and DirectX are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Macintosh, Mac OS, QuickTime, iMac, iBook, PowerBook, Power Mac and eMac are trademarks or registered trademarks of Apple Computer, Inc.
- Macromedia and Flash are trademarks or registered trademarks of Macromedia, Inc. in the United States and/or other countries.
- Intel, MMX, and Pentium are trademarks or registered trademarks of Intel Corporation.
- In addition, system and product names used in this manual are, in general, trademarks or registered trademarks of their respective developers or manufacturers. However, the TM or ® marks are not used in all cases in this manual.

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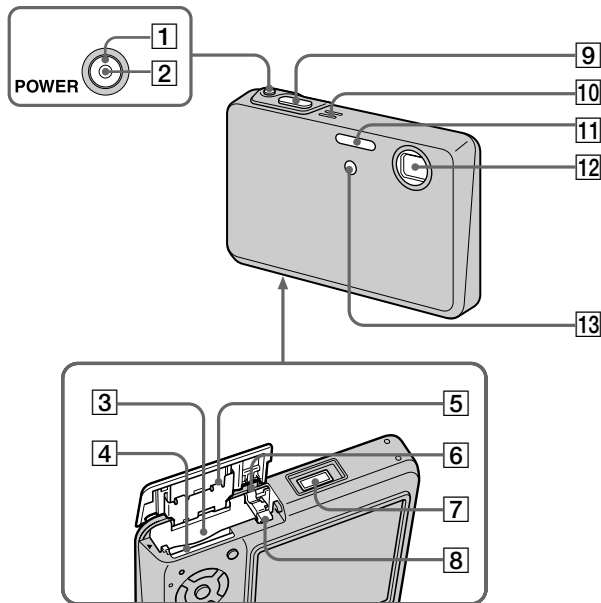
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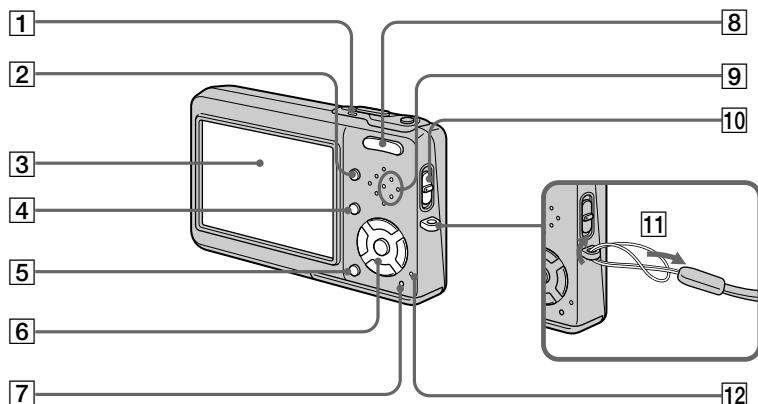
Identifying the parts

See the pages in parentheses for details of operation.

Camera



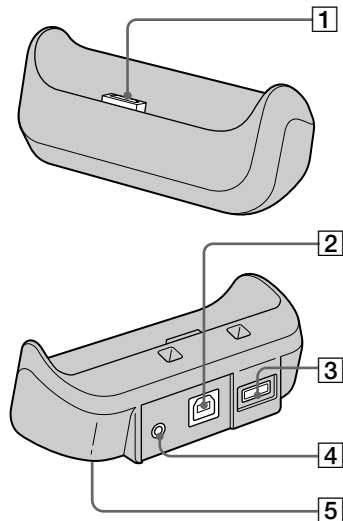
- 1 **POWER button** (20)
- 2 **POWER lamp** (20)
- 3 **Battery insertion slot** (14)
- 4 **"Memory Stick Duo" insertion slot** (24)
- 5 **Battery/"Memory Stick Duo" cover**
- 6 **Battery drop prevention lever** (14)
- 7 **Multi connector**
- 8 **Battery eject lever** (14)
- 9 **Shutter button** (29)
- 10 **Microphone** (84)
- 11 **Flash** (37)
- 12 **Lens**
- 13 **Self-timer lamp** (36)/
AF illuminator (38, 124)



- 1 **4/CHG lamp (orange)** (15)
- 2 **|** **(Display/LCD backlight on/off) button** (32)
- 3 **LCD screen**
For details on the items on the LCD screen, see page 133 to 137.
- 4 **MENU button** (53, 120)
- 5 **⌂ / ⌫ (Image Size/Delete) button** (25, 49)
- 6 **Control button**
Menu on: **▲/▼/◀/▶/●** (20)/
Menu off: **4/⌂/⌫/⌂** (37/36/32/35)
- 7 **RESET button** (105)
- 8 **For shooting: Zoom (W/T) button** (33)
For viewing: ◀/▶ (Playback zoom) button (70)/
⌂ (Index) button (45)
- 9 **Speaker**
- 10 **Mode switch** (21, 120)
⌂: To shoot movies
📷: To shoot still images
▶: To view or edit images
- 11 **Hook for wrist strap**
Attaching the strap
Attaching the strap is recommended to prevent dropping the camera.
- 12 **Access lamp** (24)

Cyber-shot Station

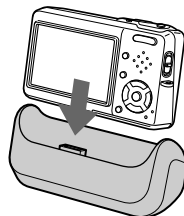
This is used when charging the battery pack or connecting the camera to a TV or a computer, etc.



- 1 Camera connector
- 2 Ψ (USB) jack (91)
- 3 DC IN jack (15)
- 4 A/V OUT (MONO) jack (46)
- 5 Tripod receptacle (bottom surface)

How to connect

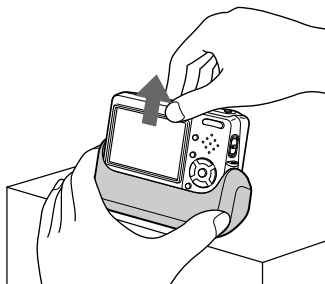
Connect the camera as illustrated.



- Make sure the camera is securely connected to the Cyber-shot Station.

How to disconnect

Grasp the camera and the Cyber-shot Station (supplied) as illustrated and disconnect the camera.



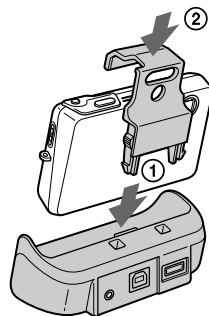
Attaching a tripod

Secure the camera to the Cyber-shot Station beforehand using the supplied tripod camera holder.

- See the operating instructions supplied with the tripod for the method of attaching the tripod.

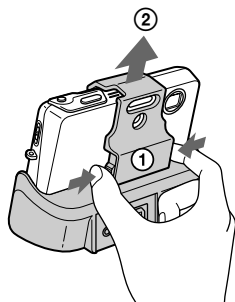
How to attach the tripod camera holder



Connect the camera to the Cyber-shot Station, then insert the tripod camera holder in the direction of the arrow until it clicks.



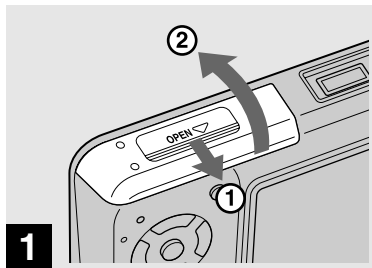
How to remove the tripod camera holder

Press the tabs and pull off the tripod camera holder as illustrated, then disconnect the camera from the Cyber-shot Station.



- Use a tripod with a screw length of less than 5.5 mm (7/32 inch). You will be unable to firmly secure the Cyber-shot Station to tripods having longer screws, and may damage the Cyber-shot Station.
- Attach the tripod so that the camera is stable. If you shoot with the camera in an unstable condition, the camera may fall, resulting in damage or malfunction.
- Be sure to turn off the camera before you connect the camera to the Cyber-shot Station or disconnect the camera from the Cyber-shot Station.
- **Do not disconnect the camera from the Cyber-shot Station during the USB connection, as the data may be corrupted. To cancel the USB connection, see  on page 92 (Windows) or  on page 103 (Macintosh).**

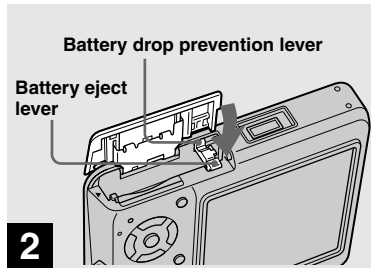
Charging the battery pack



➔ **Open the battery/“Memory Stick Duo” cover.**

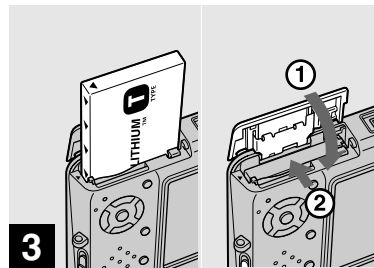
Slide the cover in the direction of the arrow.

- **Be sure to turn off your camera when charging the battery pack (page 20).**
- Your camera operates with the “InfoLITHIUM” NP-FT1 battery pack (T type) (supplied). You can use only T type battery pack (page 130).



➔ **Press the battery eject lever in the direction of the arrow.**

The battery drop prevention lever opens toward you.



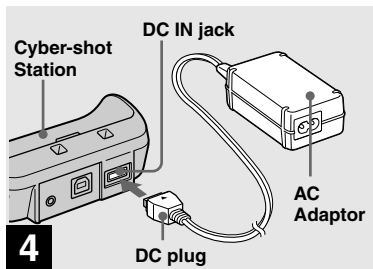
➔ **Install the battery pack, then close the battery/“Memory Stick Duo” cover.**

Make sure the battery pack is firmly inserted all the way, then close the cover.

Battery insertion slot



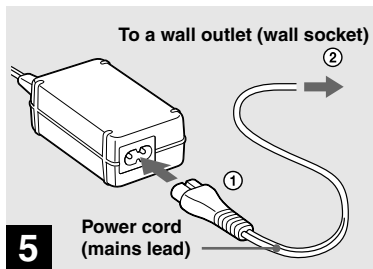
Insert the battery pack so that tip of the ▲ marks on the side of the battery pack face the tip of the ▲ mark on the battery insertion slot.



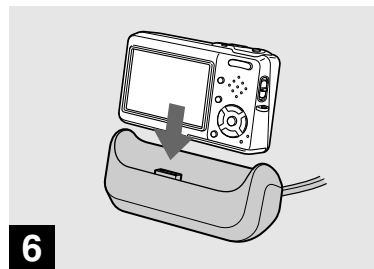
- ➔ **Connect the AC Adaptor (supplied) to the DC IN jack of the Cyber-shot Station (supplied).**

Connect the DC plug with the ▲ mark facing up.

- Do not short the DC plug of the AC Adaptor with a metallic object, as this may cause malfunction.
- Clean the DC plug of the AC Adaptor with a dry cotton bud. Do not use the dirty plug. Use of the dirty plug may not properly charge the battery pack.



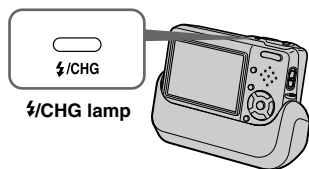
- ➔ **Connect the power cord (mains lead) to the AC Adaptor and to a wall outlet (wall socket).**



- ➔ **Connect the camera to the Cyber-shot Station.**

Connect the camera as illustrated. Make sure the camera is securely connected to the Cyber-shot Station.

The ⚡/CHG lamp lights up when charging begins.

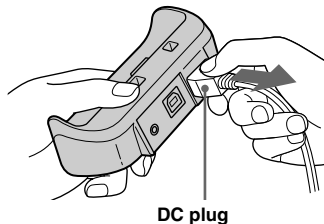


The **CHG** lamp goes off when charging is completed.

- When charging is completed, remove the camera from the Cyber-shot Station.

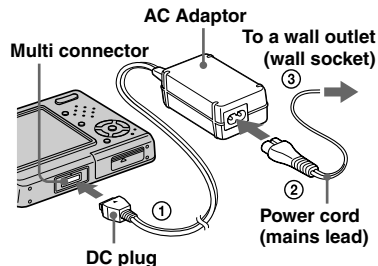
Disconnecting the AC Adaptor from the Cyber-shot Station

Hold the DC plug itself and the Cyber-shot Station as illustrated and disconnect the cable.



To charge the battery pack only using the AC Adaptor

You can charge the battery pack without the Cyber-shot Station, such as during your travels. Connect the DC plug of the AC Adaptor to the camera with ▲ mark facing as illustrated.

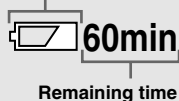


- **Be sure to turn off your camera when charging the battery pack (page 20).**
- When placing the camera, make sure the LCD screen is facing up.
- After charging the battery pack, disconnect the AC Adaptor both from the multi connector of the camera and from a wall outlet (wall socket).

Battery remaining indicator

The battery remaining indicator on the LCD screen shows the remaining shooting or viewing time.

Remaining indicator



- The displayed remaining time may not be correct under certain circumstances or conditions.

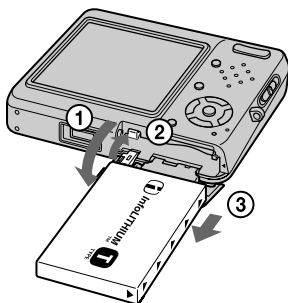
Charging time

Approximate time to charge a completely discharged battery pack using the AC Adaptor at a temperature of 25°C (77°F).

Battery pack	Charging time (min.)
NP-FT1 (supplied)	Approx. 150

- The charging time may become longer under certain circumstances or conditions.

To remove the battery pack



Open the battery/"Memory Stick Duo" cover and battery drop prevention lever, then hold the camera so that it faces downward and remove the battery pack.

- Be careful not to drop the battery pack when removing it.

Number of images and battery life that can be recorded/viewed

The tables show the approximate number of images and the battery life that can be recorded/viewed when you shoot images in normal mode with a fully charged battery pack (supplied) at a temperature of 25°C (77°F). The numbers of images that can be recorded or viewed take into account changing the “Memory Stick Duo” as necessary. Note that the actual numbers may be less than indicated depending on the conditions of use.

- The battery capacity decreases as the number of uses increases and over time (page 131).

Shooting still images

Under the average conditions¹⁾

Image size	NP-FT1 (supplied)		
	LCD backlight	No. of images	Battery life (min.)
5M	On	Approx. 180	Approx. 90
	Off	Approx. 210	Approx. 105
VGA (E-Mail)	On	Approx. 180	Approx. 90
	Off	Approx. 210	Approx. 105

¹⁾ Shooting in the following situations:

- [P.Quality] is set to [Fine]
- Shooting one time every 30 seconds
- The zoom is switched alternately between the W and T ends
- The flash strobes once every two times
- The power turns on and off once every ten times
- [AF Mode] is set to [Single] on the Setup screen

The measurement method is based on CIPA standard. (CIPA: Camera & Imaging Products Association)

Viewing still images²⁾

Image size	NP-FT1 (supplied)	
	No. of images	Battery life (min.)
5M	Approx. 3800	Approx. 180
VGA (E-Mail)	Approx. 3800	Approx. 180

²⁾ Viewing single images in order at about three second intervals

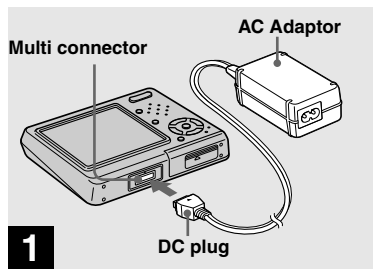
Shooting movies³⁾

NP-FT1 (supplied)	
LCD backlight On	LCD backlight Off
Approx. 80 min.	Approx. 100 min.

³⁾ Shooting movies continuously with the image size [160]

- The number of images and the battery life that can be recorded/viewed are decreased under the following conditions:
 - The surrounding temperature is low
 - The flash is used
 - The camera has been turned on and off many times
 - The zoom is used frequently
 - [LCD Backlight] is set to [Bright] on the Setup screen
 - [AF Mode] is set to [Monitor] on the Setup screen
 - The battery power is low

Using the AC adaptor

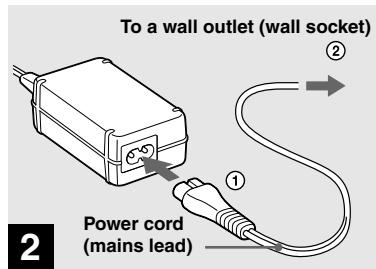


- ➔ **Connect the AC Adaptor (supplied) to the multi connector of the camera.**

When placing the camera, make sure the LCD screen is facing up.

Connect the DC plug with the ▲ mark facing up.

- Connect the AC Adaptor to an easily accessible wall outlet (wall socket) close by. If any trouble occurs while using the adaptor, immediately shut off the power by disconnecting the plug from the wall outlet (wall socket).



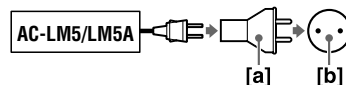
- ➔ **Connect the power cord (mains lead) to the AC Adaptor and then to a wall outlet (wall socket).**

- After using the AC Adaptor, disconnect it both from the multi connector of the camera and from a wall outlet (wall socket).
- The set is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet (wall socket) even if the set itself has been turned off.

Using your camera abroad

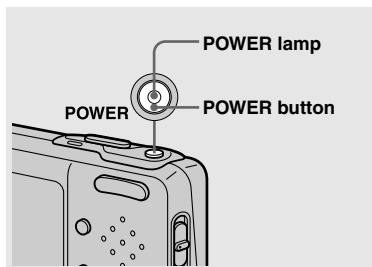
Power sources

You can use your camera in any country or region with the AC Adaptor/power cord (mains lead) (supplied) within 100 V to 240 V AC, 50/60 Hz. Use a commercially available AC plug adaptor [a], if necessary, depending on the design of the wall outlet (wall socket) [b].



- Do not use an electronic transformer (travel converter), as this may cause a malfunction.

Turning on/off your camera



➔ Press POWER.


The POWER lamp (green) lights up and the power is on. When you turn on your camera for the first time, the Clock Set screen appears (page 21).

Turning off the power

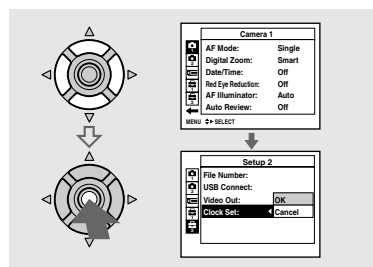
Press POWER again. The POWER lamp goes out, and the camera turns off.

Auto power-off function










If you do not operate the camera for about three minutes during shooting or viewing or when performing Setup, the camera turns off automatically to prevent wearing down the battery. The auto power-off function only operates when the camera is operating using a battery pack. The auto power-off function also will not operate in the following circumstances.

- When viewing movies
- When playing back a slide show
- When a connector is plugged into the  (USB) jack or the A/V OUT (MONO) jack with the camera connected to the Cyber-Shot Station

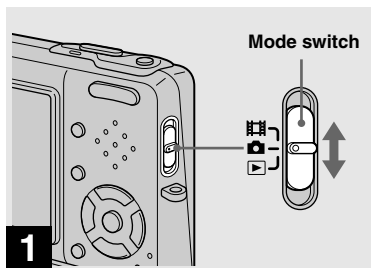
How to use the control button



To change the current settings of the camera, bring up the menu or the Setup screen (page 54), and use the control button to make the changes.


To set a menu item, press /// on the control button to select the desired item and setting and make the setting. To set a Setup item, press /// on the control button to select the desired item and setting, then press  to make the setting.



Setting the date and time

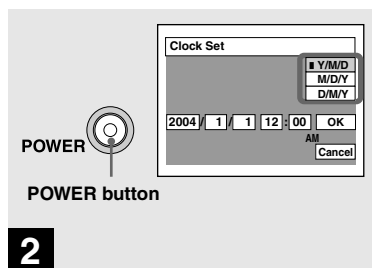


1

→ Set the mode switch to .

- To change the date and time on the Setup screen, select [Clock Set] in  (Setup 2) (pages 54 and 126), and perform the procedure from step **3**.

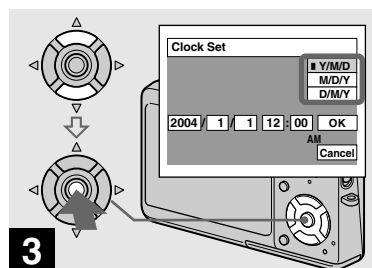
- You can also carry out this operation when the mode switch is set to  or .



2

→ Press **POWER** to turn on the power.

The POWER lamp (green) lights up and the Clock Set screen appears on the LCD screen.

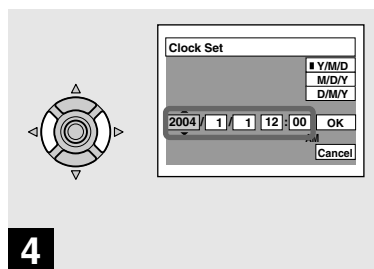


3

→ Select the desired date display format with **▲/▼** on the control button, then press **●**.

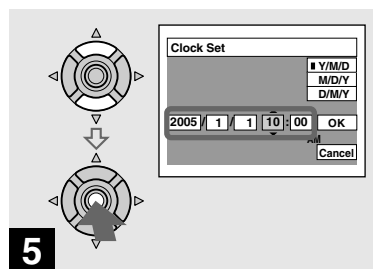
Select from [Y/M/D] (year/month/day), [M/D/Y] (month/day/year) or [D/M/Y] (day/month/year).

- If the rechargeable button battery (page 128), which provides the power for saving the time data, ever becomes low, the Clock Set screen will appear again. When this happens, reset the date and time, by starting from step **3** above.



➔ **Select the year, month, day, hour or minute item you want to set with ◀/▶ on the control button.**

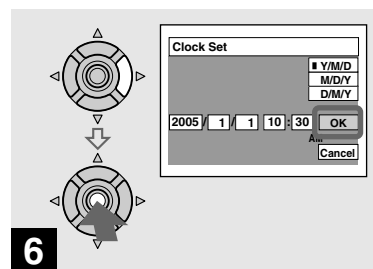
The item to be set is indicated with ▲/▼.



➔ **Set the numeric value with ▲/▼ on the control button, then press ● to enter it.**

After entering the number, ▲/▼ moves to the next item. Repeat steps 4 and 5 until all of the items are set.

- If you selected [D/M/Y] in step 3, set the time on a 24-hour cycle.
- Midnight is indicated as 12:00 AM, and noon as 12:00 PM.





➔ **Select [OK] with ▶ on the control button, then press ●.**

The date and time are entered and the clock starts to keep time.

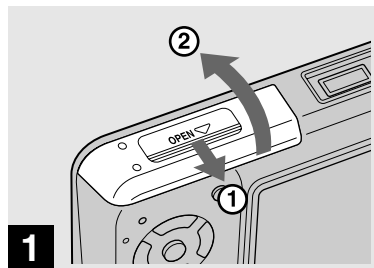
- To cancel the date and time setting, select [Cancel] with ▲/▼/◀/▶ on the control button, then press ●.

Changing the language setting

You can change the screen display like menu items, warnings and messages in your desired language.

To change the language setting, select  (Language) in  (Setup 1) on the Setup screen (pages 54 and 125) and select the desired language.

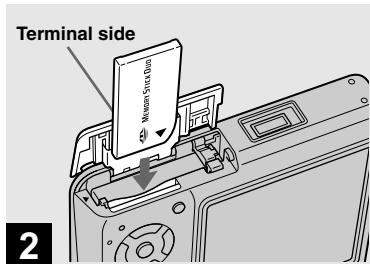
Inserting and removing a “Memory Stick Duo”



➔ Open the battery/“Memory Stick Duo” cover.

Slide the cover in the direction of the arrow.

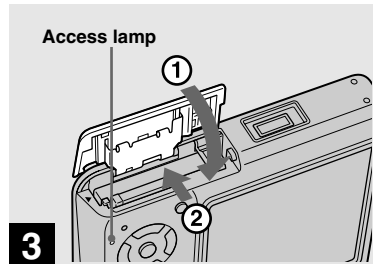
- When using this camera, the Memory Stick Duo Adaptor (supplied) is not necessary.
- For details on “Memory Stick Duo”, see page 128.



➔ Insert the “Memory Stick Duo”.

Insert a “Memory Stick Duo” all the way in until it clicks as illustrated.

- When inserting a “Memory Stick Duo”, make sure of the direction and insert it all the way to the connector. If the “Memory Stick Duo” is not inserted correctly, you may not be able to record or display images with the “Memory Stick Duo”. And also it may result in malfunction of both the camera and “Memory Stick Duo”.



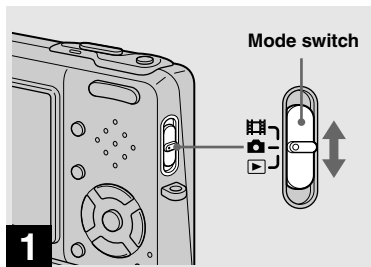
➔ Close the battery/“Memory Stick Duo” cover.


To remove a “Memory Stick Duo”

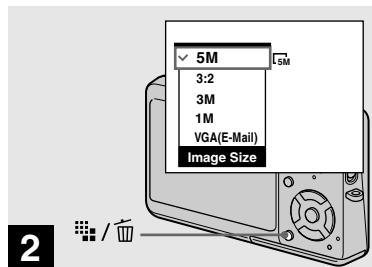
Open the battery/“Memory Stick Duo” cover, then push the “Memory Stick Duo” to pop it out.

- Whenever the access lamp is lit, the camera is recording or reading an image. Never remove the “Memory Stick Duo” or turn off the power at this time. The data may be corrupted.

Setting the still image size



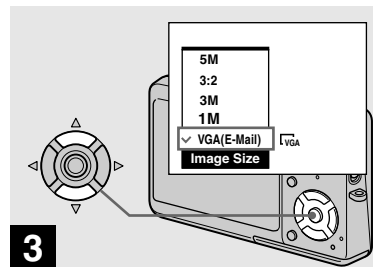
➔ Set the mode switch to , and turn on the power.





➔ Press  /  (Image Size).



The Image Size setup appears.

- For details on the image size, see page 26.



➔ Select the desired image size with  /  on the control button.

The image size is set.

When the setting is complete, press  /  (Image Size) so that the Image Size setup disappears from the LCD screen.

- The image size selected here is maintained even when the power is turned off.

Image size and quality

You can choose image size (number of pixels) and image quality (compression ratio) based on the kind of images you want to shoot.

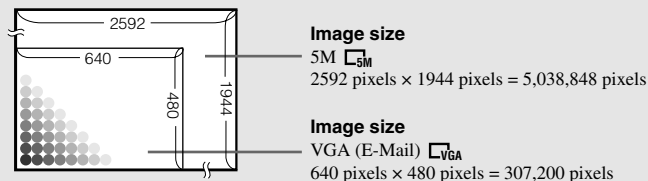
The image size is shown by the number of pixels (dots) (horizontal × vertical), which compose an image. For example, a 5M (2592×1944) size image indicates that there are 2592 pixels horizontally and 1944 pixels vertically. The larger the number of pixels, the larger the image size.

You can select from Fine (high quality) or Standard image quality. Each uses a different compression ratio.

When you select Fine, the image quality improves as the image size increases, but the amount of recorded data also increases and the number of images that can be recorded on a “Memory Stick Duo” decreases. Refer to the table on the right and choose the image size and image quality appropriate to the kind of images you want to shoot.

Short description of the image size

The following illustration shows a brief image using the maximum image size and the minimum one.



Examples based on the image size

Image size		Usage guidelines
5M ¹⁾ (2592×1944)	<div>Larger</div> <div>↑</div> <div>↓</div> <div>Smaller</div>	<ul style="list-style-type: none">For saving important images, printing in A4 size or printing A5 size high density imagesFor printing in postcard sizeFor recording a larger number of imagesFor attaching images to e-mail or creating home pages
3:2 ²⁾ (2592×1728)		
3M (2048×1536)		
1M (1280×960)		
VGA (E-Mail) (640×480)		

¹⁾ The factory setting is [5M]. It is the highest image quality on this camera.

²⁾ Images are recorded in the same 3:2 aspect ratio as photograph printing paper or postcards, etc.

Examples based on the image quality

Image quality (Compression ratio)		Usage guideline
Fine	Low compression (looks better)	<ul style="list-style-type: none">• For recording or printing with better image quality.
Standard	High compression (normal)	

Number of still images that can be recorded

The number of images that can be saved in a “Memory Stick Duo”¹⁾

The number of images that can be saved when [P.Quality] is set to [Fine] ([Standard])²⁾ are shown below.

- The table below shows the approximate number of images that can be recorded on a “Memory Stick Duo” that has been formatted by this camera.

(Units: number of images)

Capacity Image size	16MB	32MB	64MB	128MB	256MB	512MB
5M	6 (11)	12 (23)	25 (48)	51 (96)	92 (174)	188 (354)
3:2	6 (11)	12 (23)	25 (48)	51 (96)	92 (174)	188 (354)
3M	10 (18)	20 (37)	41 (74)	82 (149)	148 (264)	302 (537)
1M	24 (46)	50 (93)	101 (187)	202 (376)	357 (649)	726 (1320)
VGA (E-Mail)	97 (243)	196 (491)	394 (985)	790 (1975)	1428 (3571)	2904 (7261)

¹⁾ When [REC Mode] is set to [Normal].

For the number of images that can be saved in other modes, see page 119.

²⁾ For more information about the image quality (compression ratio), see page 54.

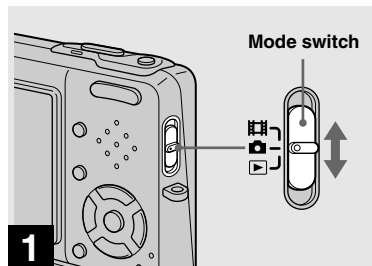
- When images recorded using earlier Sony models are played back on this camera, the display may differ from the actual image size.
- When the images are viewed on the LCD screen of the camera, they all look the same size.
- The number of shooting images may differ from these values according to the shooting mode, shooting conditions and the subject.
- When the number of remaining shooting images is greater than 9,999, the “>9999” indicator appears on the LCD screen.
- You can resize the images later (Resize function, see page 75).


Basic still image shooting — Using auto adjustment mode

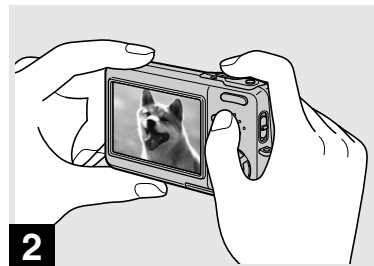
Holding the camera correctly



When shooting pictures with the camera, be careful so that your fingers do not block the lens portion, flash emitter or microphone. (page 10)

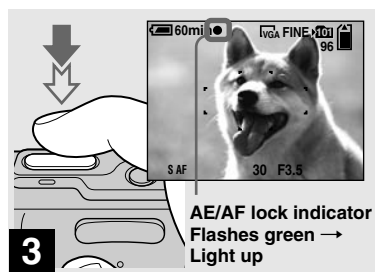


➔ Set the mode switch to , and turn on the power.



➔ Hold the camera steadily with both hands and position the subject in the center of the focus frame.

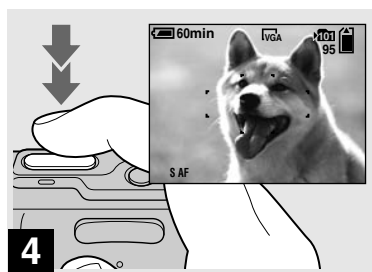
- The minimum focal distance to a subject is approx. 50 cm (19 3/4 inches). To shoot subjects at distances closer than this, use the close-ups (Macro) mode (page 35).
- The frame indicated on the LCD screen shows the focus adjustment range (AF range finder, page 57).



→ Press and hold the shutter button halfway down.

The beep sounds but the image is not yet recorded. When the AE/AF lock indicator changes from flashing to steadily lit, the camera is ready for shooting.
(The LCD screen may be frozen for a split second depending on the subject.)

- If you release the shutter button, shooting will be canceled.
- You can continue and shoot even when the camera does not beep, but in this case the focus is not set properly.
- No beep sounds when [Beep] is set to [Off] on the Setup screen (page 125).





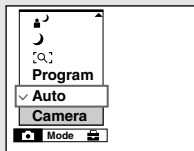
→ Press the shutter button fully down.

The shutter sounds. The image will be recorded in the “Memory Stick Duo”.
The recorded image is displayed for approximately two seconds (Auto Review, page 124).

- When operating the camera using a battery pack, if you do not operate the camera for a while during recording or playback, the camera turns off automatically to prevent wearing down the battery (page 20).



Mode switch

When you set the mode switch to , the functions that can be used change as follows according to  (Camera) in the menu.



Still image auto shooting [Auto]

The focus, exposure and white balance are automatically adjusted as needed to allow easy shooting. In addition, the image quality is set to [Fine] (page 54), the AF range finder frame is set to [Multi AF], and the metering mode is set to [Multi] (pages 57 and 62).


Only , [Mode] (REC Mode) and  (Setup) appear in the menu.

Still image program shooting [Program]

The necessary adjustments are made automatically like still image auto shooting, but you can also change the focus and other adjustments as desired. In addition, you can also set the desired shooting functions using menus (pages 53 and 120).


 (Magnifying glass mode) (page 40)


 (Twilight mode) (page 40)


 (Twilight portrait mode) (page 40)

 (Landscape mode) (page 40)

 (Snow mode) (page 41)






 (Beach mode) (page 41)

 (High-speed shutter mode) (page 41)

 (Fireworks mode) (page 41)

 (Candle mode) (page 41)

To switch the shooting method

- 1 Set the mode switch to .
- 2 Press MENU.
- 3 Select  (Camera) with  on the control button.
- 4 Select the desired shooting mode with / on the control button.

Auto Focus

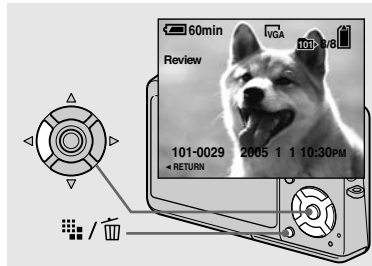
When you try to shoot a subject that is difficult to focus on, the AE/AF lock indicator changes to flashing slowly. In addition, the AE locked beep does not sound.

The Auto Focus function may have difficulty working under the following conditions. In such cases, release the shutter button, then recompose the shot and focus again.

- The subject is distant from the camera and dark.
- The contrast between the subject and its background is poor.
- The subject is seen through glass, such as a window.
- A fast-moving subject.
- The subject reflects or has a lustrous finish, such as a mirror or a luminous body.
- A flashing subject.
- A backlit subject.

There are two Auto Focus functions: “AF range finder frame” which sets the focus position according to the subject position and size, and “AF mode” which sets the focus start/finish timing. See page 57 for details.

Checking the last image you shot — Quick Review



→ Press ◀ (◂) on the control button.

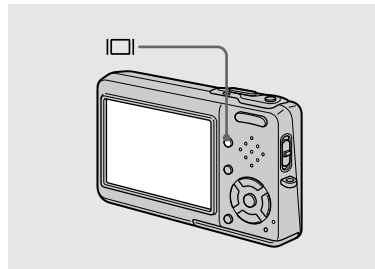
To return to the normal shooting mode, press lightly on the shutter button or press ◀ (◂) again.

To delete the image displayed on the LCD screen

- 1 Press [Grid/Trash] (Delete).
 - 2 Select [Delete] with ▲ on the control button, then press ●.
- The image is deleted.

- The image may appear rough right after playback starts due to the image processing.

Indicators on the LCD screen during shooting

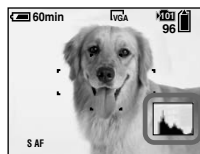


Each time you press [Indicator], the display changes in the following order.

- For a detailed description of the indicators, see page 133.
- For a detailed description of the histogram, see page 61.
- You can extend the battery remaining time by turning off the LCD backlight.
- When shooting/viewing movies, the status of the LCD screen changes as follows: Indicators off → LCD backlight off → Indicators on
- This setting is maintained even when the power is turned off.

Using the zoom feature

Histogram on (Image information can also be displayed during playback.)

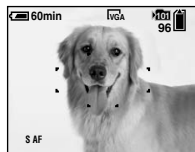


Indicators off

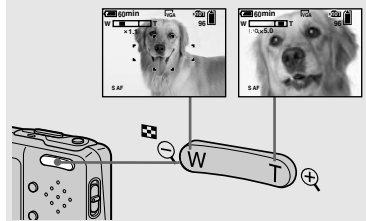


LCD backlight off

Indicators on



W (wide-angle) T (telephoto)



➔ **Press the zoom buttons to choose the desired zoom position for shooting.**

The minimum focal distance to the subject

Approx. 50 cm (19 3/4 inches) from the lens surface for both W/T sides

- You cannot change the zoom scale while shooting movie (page 84).

Zoom

Your camera is equipped with the following zoom functions.

The enlargement method and the zoom scale differ according to the image size and the zoom type, so select the zoom to match the shooting purpose.

Optical zoom

The telephoto and wide angle adjustment is made by the lens in the same manner as a conventional film camera. The maximum optical zoom is 3×.

Digital zoom

The camera has the following two types of digital zoom.

Smart zoom

The image is enlarged with almost no distortion. This lets you use smart zoom with the same feeling as optical zoom. The maximum smart zoom scale depends on the selected image size as shown in the following table.

Precision digital zoom

All image sizes are enlarged up to a maximum 6×. Precision digital zoom function cuts out and enlarges a certain portion of the image, so the image quality deteriorates.



Optical zoom

Precision digital zoom

Image size	Maximum smart zoom scale	Maximum precision digital zoom scale
5M	—*	6×
3:2	—*	6×
3M	approx. 3.8×	6×
1M	approx. 6.1×	6×
VGA (E-Mail)	approx. 12×	6×

* The maximum optical zoom scale is 3×

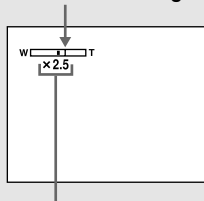
- The maximum smart zoom and precision digital zoom scale includes the optical zoom scale.
- When using the smart zoom, the image on the LCD screen may look rough. However, this phenomenon has no effect on the recorded image.
- You cannot use the smart zoom in the Multi Burst mode.

To set digital zoom

Set [Digital Zoom] to [Smart] or [Precision] on the Setup screen (page 124). (When you purchase your camera, [Digital Zoom] is set to [Smart].)

When you press the zoom button, the zoom scaling indicator appears on the LCD screen as follows.

The W side of this line is optical zoom, and the T side is digital zoom



Zoom scaling indicator

- The zoom scaling indicator differs according to the zoom type.
 - Optical zoom: **x**
 - Smart zoom: **SQx**
 - Precision digital zoom: **PQx**
- The AF range finder frame does not appear when using the digital zoom. The **[AF]**, **[T]** or **[W]** indicators flashes, and AF operates with priority on subjects located near the center.

Shooting close-ups — Macro



The close-ups (Macro) recording mode is used when zooming up subjects such as flowers or insects. Setting the zoom all the way to the W side lets you shoot subjects at distances as close as 8 cm (3 1/4 inches). However, the minimum focus distance varies according to the zoom position. Therefore, shooting with the zoom set all the way to the W side is recommended.

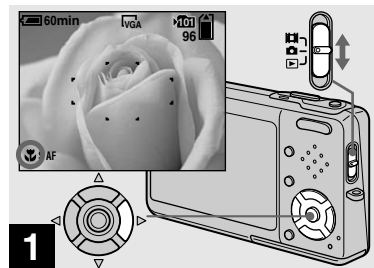
When the zoom is set all the way to the W side:



Approx. 8 cm (3 1/4 inches) from the lens surface


When the zoom is set all the way to the T side:







Approx. 25 cm (9 7/8 inches) from the lens surface

- Using Spot AF is recommended (page 57).
- To shoot at even closer distances than close-ups (Macro) recording, use **[Q]** (Magnifying glass mode) (page 40).

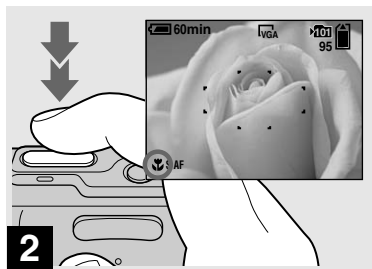


➔ Set the mode switch to , and press **▶** () on the control button.

The  (Macro) indicator appears enlarged on the LCD screen (page 124).

- If the menu is currently displayed, press MENU first so that the menu disappears.
- You can also carry out this operation when the mode switch is set to .
- You cannot use this function when  (Camera) in the menu is set to **[Q]** (Magnifying glass mode),  (Twilight mode),  (Landscape mode),  (Fireworks mode) and  (Candle mode).

Using the self-timer

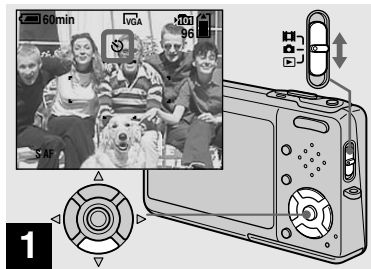



➔ **Center the subject in the frame. Press and hold the shutter button halfway down to focus on, then press the shutter button fully down.**

To return to normal recording mode


Press **▼** (📷) on the control button again. The 📷 indicator disappears from the LCD screen.

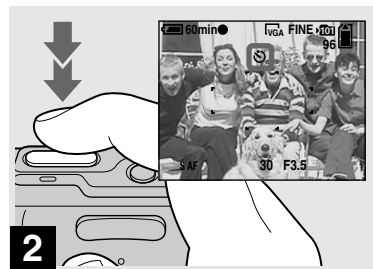
- When shooting in close-ups (Macro) mode, the in-focus range becomes extremely narrow, and the entire subject may not be in focus.
- When shooting in close-ups (Macro) mode, the AF speed drops in order to focus accurately on close subjects.



➔ **Set the mode switch to , and press **▼** (📷) on the control button.**

The 📷 (self-timer) indicator appears enlarged on the LCD screen (page 124).

- When recording with the self-timer, place the camera in a stable location. If you place the camera in an unstable location for recording, the camera may fall and become damaged or malfunction.
- If the menu is currently displayed, press MENU first so that the menu disappears.
- You can also carry out this operation when the mode switch is set to .



➔ **Center the subject in the frame. Press and hold the shutter button halfway down to focus on, then press the shutter button fully down.**

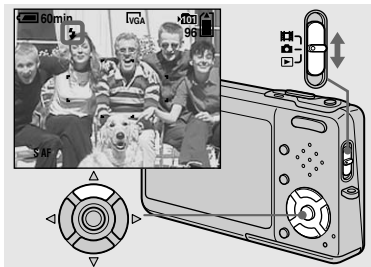
The self-timer lamp (page 10) flashes and a beep sounds after you press the shutter button until the shutter operates (approximately 10 seconds later).


To cancel the self-timer in the middle of the operation

Press **▼** (📷) on the control button again. The 📷 indicator disappears from the LCD screen.

- If you press the shutter button while standing in front of the camera, the focus and the exposure may not be correctly set.

Selecting a flash mode



➔ Set the mode switch to , and press **▲ (⚡)** on the control button repeatedly to select a flash mode.


The selected flash mode indicator appears enlarged on the LCD screen (page 124). Each time you press **▲ (⚡)**, the indicator changes as follows.

No indicator (Auto): The flash automatically strobos when shooting images in a dark place. The factory setting is Auto.

⚡ (Forced flash): The flash strobos regardless of the surrounding brightness.


⚡SL (Slow synchro): The flash strobos regardless of the surrounding brightness. The shutter speed is slow in a dark place, so you can clearly shoot the background that is out of flash light.

⚡ (No flash): The flash does not strobe.

- If the menu is currently displayed, press MENU first so that the menu disappears.
- The recommended shooting distance using the flash is approx. 0.1 m to 1.7 m (4 inches to 5 feet 6 7/8 inches) (W)/0.5 m to 1.6 m (1 foot 7 3/4 inches to 5 feet 2 7/8 inches) (T) (When [ISO] is set to [Auto] in the menu settings).
- The flash strobos twice. The first time is the pre-flash which is used to adjust the flash light quantity, and the second time is the actual flash during which the image is recorded.
- You can change the brightness of the flash with **⚡±** (Flash Level) in the menu settings (page 66). (You cannot change the brightness of the flash while  (Camera) in the menu is set to [Auto] in the menu.)
- When using the **⚡SL** (Slow synchro) or **⚡ (No flash)** mode, the shutter speed becomes slower in dark places, so using a tripod is recommended.
- While charging the flash, the **⚡/CHG** lamp flashes. After the charging is complete, the lamp goes out and flash mode is ready.
- Flash mode setting is maintained even when the power is turned off.

To prevent subjects' eyes from appearing red

The flash pre-strobes twice or more before shooting to reduce the red-eye phenomenon.

Set [Red Eye Reduction] to [On] on the Setup screen (page 124). The  indicator appears on the LCD screen.

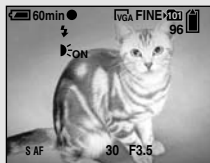


Red-eye reduction takes approximately one second before actually shooting the image, so hold the camera firmly to avoid shaking. In addition, be sure to tell the subject to hold still.

- Red-eye reduction may not produce the desired effects depending on individual differences, the distance to the subject, if the subject does not see the pre-strobe, or other conditions. In addition, red-eye reduction is more effective under bright lighting and when closer to the subject.

Shooting images with the AF illuminator

The AF illuminator is fill light to focus more easily on a subject in dark surroundings. The **AF-CON** appears on the LCD screen and the AF illuminator emits red light when the shutter button is pressed halfway until the focus is locked.

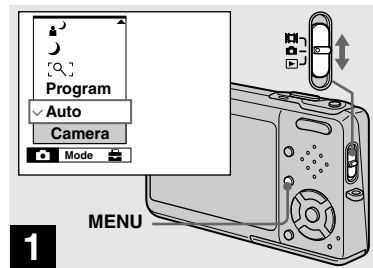



When this function is not needed, set [AF Illuminator] to [Off] on the Setup screen (page 124).

- If AF illuminator light does not reach the subject sufficiently or the subject has no contrast, focus will not be achieved. (A distance up to approximately 2.4 m (7 feet 10 3/8 inches) (W)/3.7 m (12 feet 1 5/8 inches) (T) is recommended.)
- Focus is achieved as long as AF illuminator light reaches the subject, even if the light is slightly off the center of the subject.
- When the focus preset distance is set (page 59), the AF illuminator does not function.



- The AF range finder frame does not appear. The **AF-ON**, **AF-LOCK** or **AF-ASSIST** indicator flashes, and AF operates with priority on subjects located near the center.
- The AF illuminator operates only when **Camera** is set to [Auto], [Program], [Q] (Magnifying glass mode), [Twilight portrait mode], [Snow mode], [Beach mode] or [Candle mode] in the menu.
- The AF illuminator emits very bright light. Although there are no problems with safety, directly looking into the AF illuminator emitter at close range is not recommended.

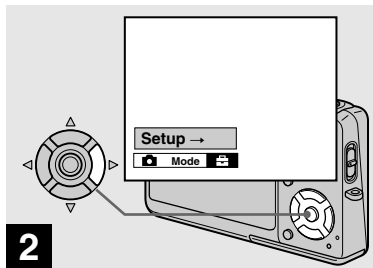
Inserting the date and time on a still image




- ➔ **Set the mode switch to , then press MENU.**

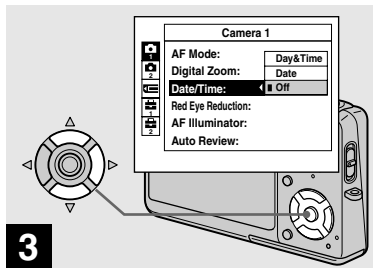
The menu appears.


- When images are shot with the date and time superimposed, the date and time cannot be removed later.
- The date and time are not inserted in Multi Burst mode.
- The date and time do not appear on the LCD screen during shooting, instead, **DATE** indicator appears on the LCD screen. The actual date and time appear in red on the lower-right corner during playback only.
- You can also carry out this operation with the mode switch set to  or .

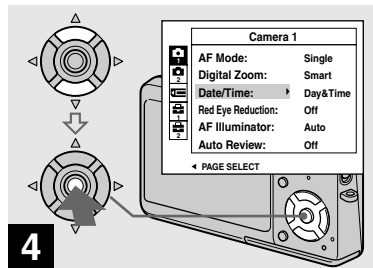


- ➔ Press ► on the control button to advance to , then press ► again.

The Setup screen appears.



- ➔ Select  (Camera 1) with ▲ on the control button, then press ►.
- Select [Date/Time] with ▲/▼, then press ►.



- ➔ Select the date and time setting with ▲/▼ on the control button, then press ●.

Day&Time: Superimposes the date, hour, and minute onto the image.

Date: Superimposes the year, month and day onto the image.

Off: Does not superimpose the date and time onto the image.

After the setting has been completed, press MENU first so that the menu disappears, and shoot the image.

- If you select [Date], the date is superimposed onto the image in the order selected in "Setting the date and time" (page 21).
- Date and time setting is maintained even when the power is turned off.

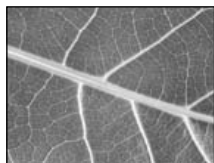
Shooting according to scene conditions — Scene Selection

You can shoot more effectively by selecting the appropriate mode and then pressing the shutter button.

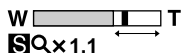
[Q.] Magnifying glass mode

The subject appears on the LCD screen magnified by up to 3.3×. This lets you see details that would otherwise be difficult to confirm with the naked eye.

Distance to the subject	Magnification scale
1 cm (13/32 inch)	3.3×
2 cm (13/16 inch)	2.1×
5 cm (2 inches)	1.0×
10 cm (4 inches)	0.5×
20 cm (7 7/8 inches)	0.3×



- The focal distance to a subject is approx. 1 cm to 20 cm (13/32 inch to 7 7/8 inches)
- The optical zoom is locked to the W side and cannot be used.
- When you press the zoom button, the image is enlarged using the digital zoom.



☾ Twilight mode

Allows you to shoot night scenes at far distance without losing the dark atmosphere of the surroundings.



- The shutter speed becomes slower, so using a tripod is recommended.

🌆 Twilight portrait mode

Suitable for shooting portraits in dark places. Allows you to shoot sharp images of people in dark places without losing the dark atmosphere of the surroundings.



- The shutter speed becomes slower, so using a tripod is recommended.

🏞 Landscape mode

Focuses only on a distant subject to shoot landscapes, etc.



Snow mode

When shooting snowy scenes or other places where the whole screen appears white, use this mode to prevent sunken colors and record clear images.



Beach mode

When shooting seaside or lakeside scenes, the blue of the water is clearly recorded.



High-speed shutter mode

Use this mode to shoot moving subjects outdoors or in other bright places.



- The shutter speed becomes faster, so images shot in dark places become darker.

Fireworks mode

You can record fireworks in all their splendor. The focus distance is set to infinity.



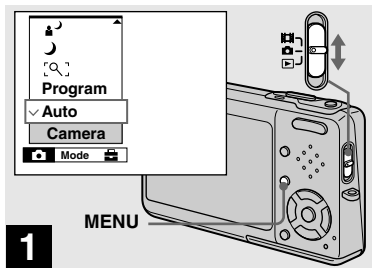
- You can change the shutter speed by setting an EV adjustment value (page 60).
- The shutter speed becomes slower, so using a tripod is recommended.


Candle mode

You can record parties, candle services and other candlelit scenes without spoiling the candlelight atmosphere.

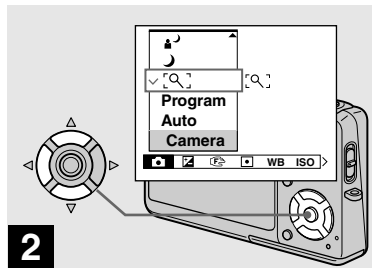



- The shutter speed becomes slower, so using a tripod is recommended.



- ➔ Set the mode switch to , then press MENU.

The menu appears.



- ➔ Select  (Camera) with ◀ on the control button, then select the desired mode with ▲/▼.

To return to normal mode

Select [Auto] or [Program] with ▲/▼ on the control button.

- Scene Selection setting is maintained even when the power is turned off.

Shooting with Scene Selection

When shooting with the Scene Selection function, the combination of functions such as the flash mode is predetermined to make the optimum settings to match the scene. See the table below for the function setting of each shooting mode.

Function Shooting mode	Macro	Flash mode	AF range finder frame	Focus preset	Exposure bracket	White balance	Flash level	Burst/Speed Burst/Multi Burst
	—		○	—	—	○	○	—
	—		○	∞	—	○	—	—
	○		○	○	—	Auto/	○	—
	—		○	∞	○	○	○	○
	○		○	○	○	○	○	○
	○		○	○	○	○	○	○
	○		○	○	○	○	○	○
	—		—	∞	—		—	—
	—		Center AF	0.5m/1.0m/ 3.0m/7.0m	—		—	—

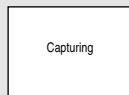
- indicates that the function can be set to your preference.

NR slow shutter

The NR slow shutter function reduces noise from recorded images, providing clear images. When the shutter speed is 1/6 second or slower, the camera automatically activates the NR slow shutter function and “NR” is indicated next to the shutter speed indicator.



Press the shutter button fully down.



Then the screen turns black.



Finally, when “Processing” disappears, the image has been recorded.

- Do not move the camera while “Capturing” appears. To eliminate the effects of vibration, using a tripod is recommended.
- When a slow shutter speed is set by the camera, the processing may take some time.

Viewing images on the LCD screen of your camera

Single (single-image) screen



You can view images shot with your camera almost immediately on the LCD screen. You can select the following three methods for viewing images.

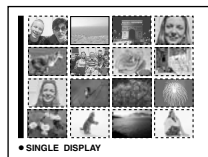
Single (single-image) screen

You can view one image at a time, displayed over the entire screen.

Index (nine-image) screen



Index (sixteen-image) screen

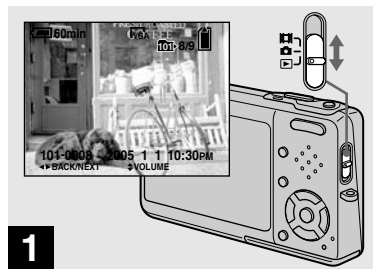



Index (nine-image/sixteen-image) screen

Nine or sixteen images are displayed simultaneously in separate panels on the LCD screen.

- For details on viewing movies, see page 85.
- For a detailed description of the indicators, see page 136.

Viewing single images

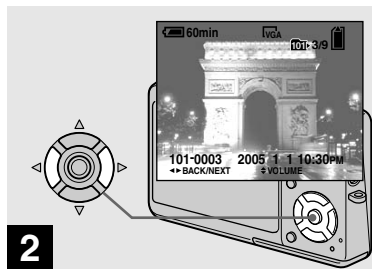


1 ➔ Set the mode switch to , and turn on the power.

The last image in the selected recording folder (page 69) appears on the LCD screen.

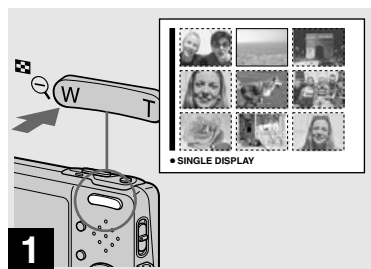
- The image may appear rough right after playback starts due to the image processing.


Viewing an index (nine-image or sixteen-image) screen



➔ **Select the desired still image with ◀/▶ on the control button.**

◀: To display the preceding image
▶: To display the next image

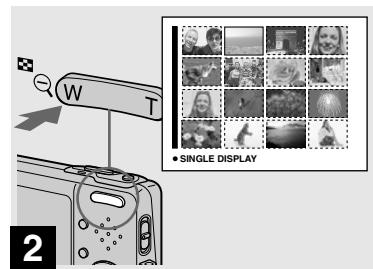


➔ **Press  (index) once.**

The display switches to the **index (nine-image) screen**.

To display the next (previous) index screen

Press ▲/▼/◀/▶ on the control button to move the yellow frame up/down/left/right.



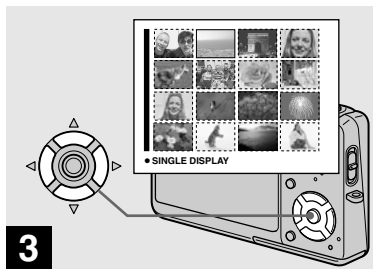
➔ **Press  (index) once more.**

The display switches to the **index (sixteen-image) screen**.

To display the next (previous) index screen

Press ▲/▼/◀/▶ on the control button to move the yellow frame up/down/left/right.

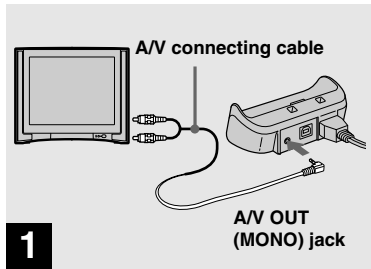
Viewing images on a TV screen



- ➔ **Select the desired still image with ▲/▼/◀/▶ on the control button.**

The image in the yellow frame is selected.

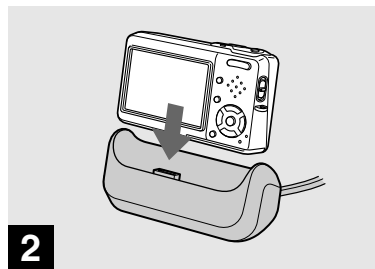
To return to the single-image screen
Press the zoom T or press ● on the control button.



- ➔ **Connect the A/V connecting cable (supplied) to the A/V OUT (MONO) jack of the Cyber-shot Station (supplied) and the audio/video input jacks of the TV.**

If your TV has stereo input jacks, connect the audio plug (black) of the A/V connecting cable to the left audio jack.

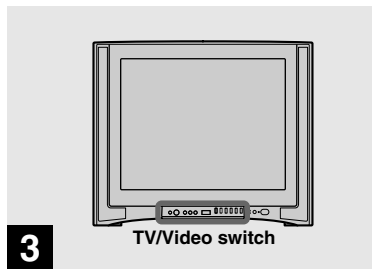
- When the USB cable is connected to the Cyber-shot Station, remove the USB cable from the Cyber-shot Station.
- Turn off both your camera and the TV before connecting the camera and the TV with the A/V connecting cable.



- ➔ **Connect the camera to the Cyber-shot Station.**

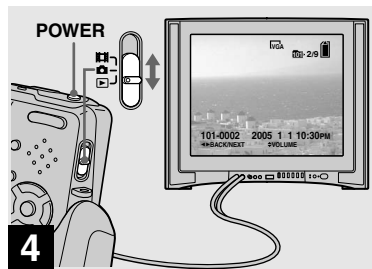
Connect the camera as illustrated.


- Make sure the camera is securely connected to the Cyber-shot Station.




➔ Turn on the TV and set the TV/Video switch to “Video”.

- The name and location of this switch may differ depending on your TV. For details, see the operating instructions supplied with the TV.



➔ Set the mode switch to , and turn on the camera.

Press /▶ on the control button to select the desired image.

- When using your camera abroad, it may be necessary to switch the video output signal to match that of your TV system (page 126).

Viewing images on a TV screen

If you want to view images on a TV screen, you need a TV with a video input jack and the A/V connecting cable (supplied).

The color system of the TV must match that of your digital still camera. Check the following lists:

NTSC system

Bahama Islands, Bolivia, Canada, Central America, Chile, Colombia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.

PAL system

Australia, Austria, Belgium, China, Czech Republic, Denmark, Finland, Germany, Holland, Hong Kong, Hungary, Italy, Kuwait, Malaysia, New Zealand, Norway, Poland, Portugal, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Thailand, United Kingdom, etc.

PAL-M system

Brazil

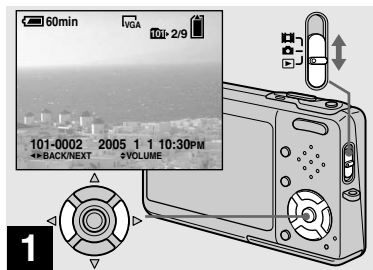
PAL-N system



Argentina, Paraguay, Uruguay

SECAM system

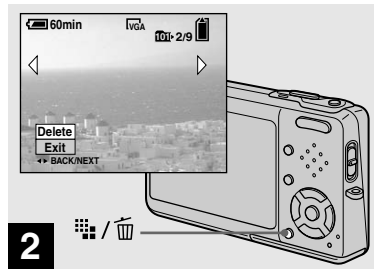
Bulgaria, France, Guiana, Iran, Iraq, Monaco, Russia, Ukraine, etc.

Deleting images



- ➔ Set the mode switch to , and turn on the camera. Press /▶ on the control button to select the image you want to delete.

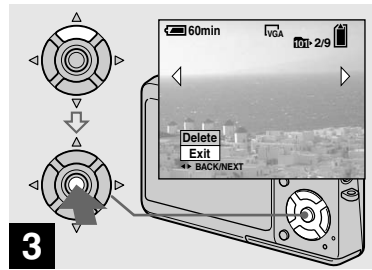
- Note that you cannot restore deleted images.



- ➔ Press  /  (Delete).

The image has not yet been deleted at this point.

- You cannot delete the protected image (page 74).



- ➔ Select [Delete] with ▲ on the control button, then press ●.

The message “Access” appears, and the image has been deleted.

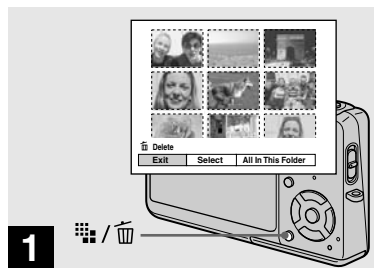
To continue and delete other images



Display the image to be deleted with ◀/▶ on the control button. Then, select [Delete] with ▲ and press ●.

To cancel deleting

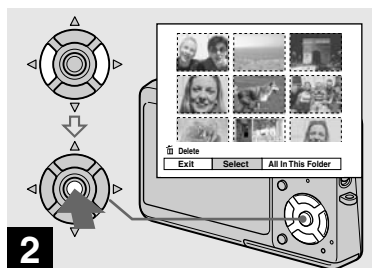
Select [Exit] with ▼ on the control button, then press ●.




Deleting images in index (nine-image or sixteen-image) mode

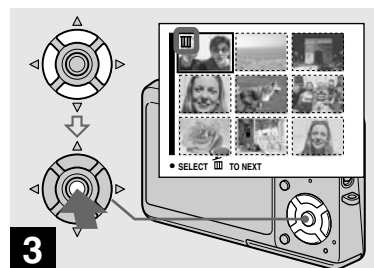


➔ While an index (nine-image/sixteen-image) screen (page 45) is displayed, press  /  (Delete).


- Note that you cannot restore deleted images.





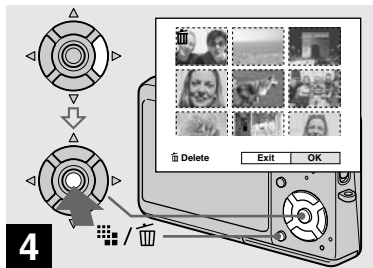
➔ Select [Select] with  /  on the control button, then press .



➔ Select an image you want to delete with  /  /  /  on the control button, then press .

The  (Delete) indicator appears on the selected image. At this point, the image has not yet been deleted. Repeat this step for all of the images you want to delete.

- To cancel a selection, select the image, then press  on the control button again so that the  indicator disappears.



➔ Press (Delete) and select [OK] with on the control button, then press .

The message “Access” appears, and the images with the indicator have been deleted.

To cancel deleting

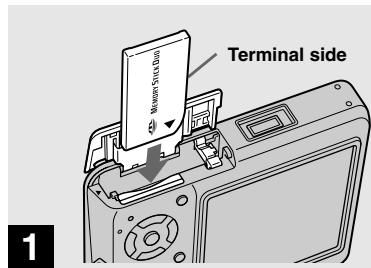
Select [Exit] with on the control button, then press .

To delete all the images in the folder

Select [All In This Folder] with on the control button in step 2, then press . Select [OK], then press . All of the unprotected images in the folder are deleted. To cancel deleting, select [Cancel], then press .

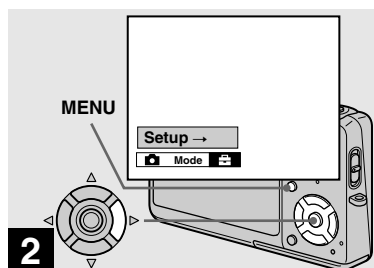
- You can also delete movies (page 86).

Formatting a “Memory Stick Duo”



➔ Insert the “Memory Stick Duo” you want to format into the camera.

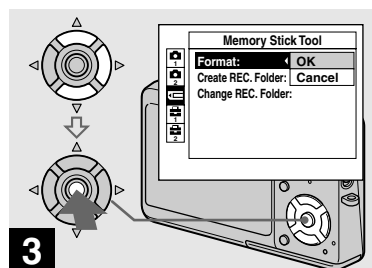
- The term “formatting” means preparing a “Memory Stick Duo” to record images; this process is also called “initialization.”
- The “Memory Stick Duo” supplied with your camera and commercially available “Memory Stick Duo” are already formatted, and can be used immediately.
- **Note that formatting the “Memory Stick Duo” erases all the data in the “Memory Stick Duo” even if images are protected, and these images cannot be recovered.**



- ➔ Turn on the camera, then press MENU.
Press **▶** on the control button to advance to **Mode**, then press **▶** again.

The Setup screen appears.

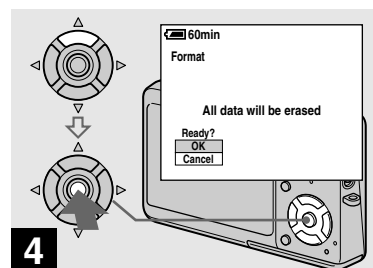
- This operation is available no matter what position the mode switch is in.



- ➔ Select **Memory Stick Tool** with **▲/▼** on the control button. Select **[Format]** with **▶**, then press **▶**.
Select **[OK]** with **▲**, then press **●**.

To cancel the formatting

Select **[Cancel]** with **▼** on the control button, then press **●**.

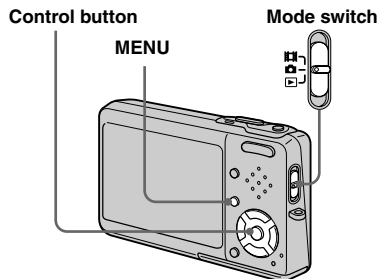


- ➔ Select **[OK]** with **▲** on the control button, then press **●**.

The message “Formatting” appears. When this message disappears, the format is complete.

How to setup and operate your camera

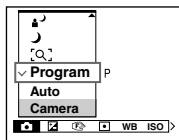
The usage of the menus and Setup screen items is described below.



Changing the menu settings

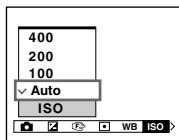
1 Press MENU.

The menu appears.



- The displayed items differ according to the mode switch position.

2 Press $\blacktriangleleft/\blacktriangleright$ on the control button to select the item you want to set.



- When the mode switch is set to \blacktriangleright , press \bullet on the control button after selecting the item.

3 Press $\blacktriangle/\blacktriangledown$ on the control button to select the desired setting.

The selected setting is enlarged and the setting is entered.

When the $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ marks appear with an item

There are items that are not displayed on the screen. Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ on the control button to display these items.

To turn off the menu display

Press MENU again.

- You cannot select items displayed in gray.
- For a detailed description of the menu items, see page 120.

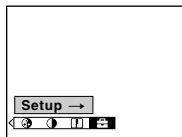
Changing the items in the Setup screen

1 Press MENU.

The menu appears.

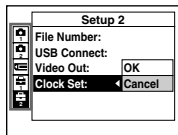
2 Press **▶** on the control button to advance to **Setup**, then press **▶** again.

The Setup screen appears.



3 Press **▲/▼/◀/▶** on the control button to select the item you want to set.

The frame of the selected item turns yellow.



4 Press **●** on the control button to enter the setting.

To turn off Setup screen display

Press MENU again.

To return to the menu from the Setup screen


Press **◀** on the control button to return to the position enclosed by the frame in step 3, then press **◀** again.

- For a detailed description of the Setup items, see page 124.

Deciding the still image quality

You can select the still image quality from [Fine] (high quality) or [Standard].

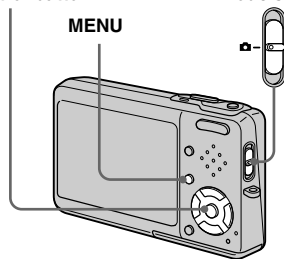
Before operation

When shooting still images, set  (Camera) in the menu to other than [Auto] (pages 53 and 120).

Control button

MENU




Mode switch

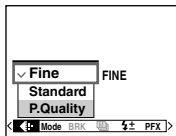


1 Set the mode switch to .

2 Press MENU.

The menu appears.

3 Select  (P.Quality) with , then select the desired image quality with .



Creating or selecting a folder

Your camera can create multiple folders within a “Memory Stick Duo”. You can select the folder used to store images before shooting, which is convenient for organizing images.

When not creating a new folder,

“101MSDCF” folder is selected as the recording folder.

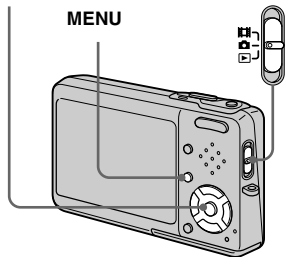
You can create folders up to “999MSDCF”.

Before operation

Set the menu to the Setup screen (pages 54 and 124).






Control button

Mode switch

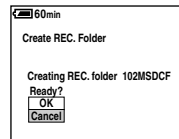




- Up to 4,000 images can be stored in one folder. When the folder capacity is exceeded, a new folder is automatically created.

Creating a new folder

1 Select  (Memory Stick Tool) with , [Create REC. Folder] with , and [OK] with , then press .

The creating folder screen appears.



2 Select [OK] with , then press .


A new folder is created with a number one higher than the largest number in the “Memory Stick Duo”, and the folder becomes the recording folder.

To cancel folder creation

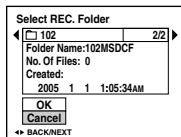
Select [Cancel] in step **1** or **2**.

- Once you create a new folder, you cannot delete the new folder with the camera.
- Images are recorded in the newly created folder until a different folder is created or selected.

Changing the recording folder

- 1 Select  (Memory Stick Tool) with $\blacktriangle/\blacktriangledown$, [Change REC. Folder] with $\blacktriangleright/\blacktriangledown$, and [OK] with $\blacktriangleright/\blacktriangle$, then press \bullet .

The recording folder selection screen appears.



- 2 Select the desired folder with $\blacktriangleleft/\blacktriangleright$, and [OK] with \blacktriangle , then press \bullet .

To cancel changing the recording folder

Select [Cancel] in step **1** or **2**.

- You cannot select the “100MSDCF” folder as a recording folder (page 95).
- The image is stored in the newly selected folder. You cannot move recorded images to a different folder with this camera.

Choosing an auto focus method

You can set the AF range finder frame and the AF mode.


AF range finder frame

This selects the focus position according to the subject position and size.

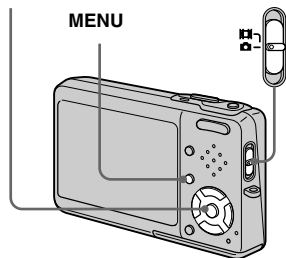
AF mode

This sets the focus operation start and stop timing.

Before operation

When shooting still images, set  (Camera) in the menu to other than [Auto] (pages 53 and 120).

Control button Mode switch



Choosing a focus range finder frame

— AF range finder

Multipoint AF



The camera calculates the distance in five areas to the left, right, top, bottom and in the center of the image, letting you shoot using the auto focus function without worrying about the image composition. This mode is useful when it is difficult to focus on the subject because it is not in the center of the frame. You can check the position where the focus was adjusted using the green frame. The factory setting is the Multipoint AF.

Center AF

This mode is useful for focusing on a subject near the center of the frame. Use together with the AF lock function lets you shoot in the desired image composition.






Spot AF

This is useful when focusing on an extremely small subject or a narrow area. Use together with the AF lock function lets you shoot in the desired image composition. Take care to hold the camera steady so that the subject does not deviate from the range finder frame.

1 Set the mode switch to  or .

2 Press MENU.





The menu appears.

3 Select  (Focus) with / , then select the desired AF range with / .



AF range finder frame

The focus is adjusted automatically. The color of the AF range finder frame changes from white to green.

- When you are shooting movies and you choose Multipoint AF, the distance to the center of the screen is estimated as an average, so the AF works even with a certain amount of vibration. The AF range finder frame is . Center AF and Spot AF automatically focus only on selected frame, so these are convenient when you want to focus only on what you aim at.
- When you use the digital zoom or AF illuminator, priority AF movement is given to subjects in or near the center of the frame. In this case the ,  or  indicator flashes and the AF range finder frame is not displayed.
- Some settings cannot be selected depending on the Scene Selection mode (page 43).

Choosing a focus operation

— AF Mode

Single AF (S AF)

This mode is useful for shooting stationary subjects. The focus is not adjusted before the shutter button is pressed and held halfway down. When the shutter button is pressed and held halfway down and AF lock is complete, the focus is locked. The factory setting is Single AF.


Monitoring AF (M AF)

This mode shortens the time needed for focusing. The camera automatically adjusts the focus before the shutter button is pressed and held halfway down, letting you compose images with the focus already adjusted. When the shutter button is pressed and held halfway down and AF lock is complete, the focus is locked.

- Battery consumption may be faster than in Single AF mode.

Before operation

Set the menu to the Setup screen (pages 54 and 124).

- 1** Select  (Camera 1) with **▲**, then select [AF Mode] with **▶/▲**.
- 2** Select the desired mode with **▶/▲/▼**, then press **●**.

Shooting techniques

When shooting with the subject at the edge of the frame, or when using Center AF or Spot AF, the camera may focus on the center instead of on the subject at the edge of the frame. In a case like this, use AF lock to focus on the subject, and then recompose the picture and shoot.

Compose the shot so that the subject is centered in the AF range finder, and press the shutter button halfway down.

When the AE/AF lock indicator stops flashing and remains on, return to the fully composed shot, and press the shutter button fully down.



AF range finder frame

AE/AF lock indicator




- When you are using AF lock, you can capture an image with the correct focus even if the subject is at the edge of the frame.
- You can carry out the AF lock adjustment process before you press the shutter button fully down.

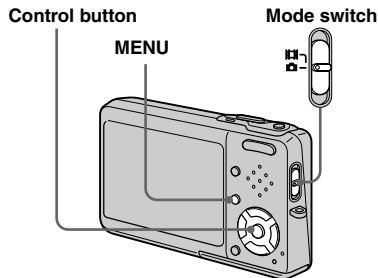
Setting the distance to the subject

— Focus preset

When shooting an image using a previously set distance to the subject, or when shooting a subject through a net or through window glass, it is difficult to get the proper focus in auto focus mode. In these cases, use of the Focus preset is convenient.

Before operation

When shooting still images, set  (Camera) in the menu to other than [Auto] (pages 53 and 120).



- 1** Set the mode switch to or .



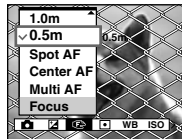
- 2** Press MENU.

The menu appears.

- 3** Select (Focus) with / , then select the distance to the subject with / .

You can select from the following distance settings.

0.5m, 1.0m, 3.0m, 7.0m, ∞ (unlimited distance)



To return to auto focus mode

In step **3**, select [Multi AF], [Center AF] or [Spot AF].

- Focus setting information is approximate, and should be used as a reference.
- Some settings cannot be selected depending on the Scene Selection mode (page 43).

Adjusting the exposure

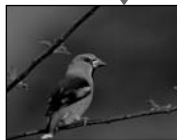
— EV adjustment

You can manually adjust the exposure determined by the camera. Use this mode when the proper exposure cannot be obtained, for example, when the contrast (difference between light and dark) between the subject and the background is extremely large.

The compensation value can be set in 1/3EV steps in the range from +2.0EV to -2.0EV.



Adjust toward -



Adjust toward +

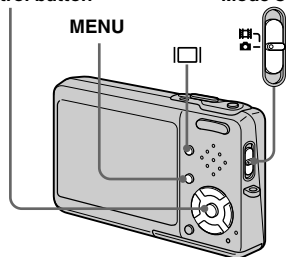


Before operation

When shooting still images, set (Camera) in the menu to other than [Auto] (pages 53 and 120).

Control button

Mode switch



- 1** Set the mode switch to or .

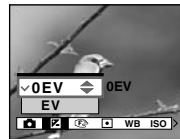


- 2** Press MENU.

The menu appears.

- 3** Select (EV) with .

The value of the exposure adjustment is displayed.



4 Select the desired exposure value with ▲/▼.

Adjust the exposure value while checking the brightness of the background.

To reactivate auto exposure

In step 4, select [0EV].



- If a subject is being shot in extremely bright or dark conditions, or the flash is used, the exposure adjustment may not be effective.




Displaying a histogram

A histogram is a graph showing the brightness of an image. The horizontal axis shows the brightness, and the vertical axis shows the number of pixels. The graph display indicates a bright image when skewed to the right side, a dark image when skewed to the left side.

A histogram can be used to check the exposure when the screen is difficult to see during recording and playback.



- 1 Set the mode switch to .
- 2 Press  to display the histogram.
- 3 Adjust the exposure based on the histogram.

- The histogram also appears when the  (Camera) in the menu is set to [Auto], but you cannot adjust the exposure.
- The histogram also appears when you press  while playing back a single image (page 44) or during Quick Review (page 32).
- The histogram does not appear in the following cases:
 - When the menu is displayed
 - During Quick Review of an image recorded in Exposure Bracket mode
 - When using playback zoom
 - When recording or playing back movies
-  appears and the histogram does not appear in the following cases:
 - When recording in the digital zoom area
 - When the image size is [3:2]
 - When playing back Multi Burst images
 - When rotating a still image
- The histogram before recording represents the histogram of the image displayed on the LCD screen at the time. A difference occurs in the histogram before and after you press the shutter button. After shooting an image, check the histogram while playing back a single-image or during Quick Review. In particular a large difference may appear in the following cases:
 - When the flash strobes
 - When the shutter speed is slow or high
- The histogram may not appear for images recorded using other cameras.

Shooting techniques

When shooting images, the camera automatically sets the exposure.

When shooting a whitish overall image such as a backlit subject or a snowy scene, the camera may judge that the subject is bright and set a darker exposure for the image. In such cases, adjusting the exposure in the + (plus) direction is effective.



Adjust in the + direction



When shooting a dark subject that fills the frame, the camera may judge that the subject is dark and set a brighter exposure for the image. In such cases, adjusting the exposure in the - (minus) direction is effective.



Adjust in the - direction



Refer to the histogram and adjust so that the image is not overexposed (white out) or underexposed (black out).

Try various images with different exposures to find the brightness that suits your taste.

Selecting the metering method

You can select the metering mode that sets which part of the subject to measure to determine the exposure.


Multi-pattern metering (No indicator)

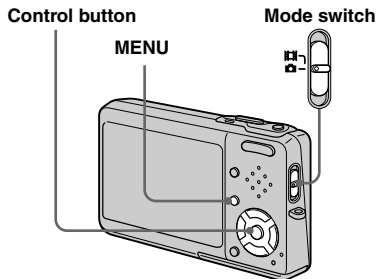
The image is divided into multiple regions and metering is performed for each region. The camera judges the subject position and background brightness, and determines a well-balanced exposure. The factory setting is the multi-pattern metering.

Spot metering ()

Metering is performed for only a part of the subject. This lets you shoot images that are not too dark even when the subject is backlit, or adjust the exposure to the subject when there is strong contrast between the subject and the background.

Before operation

When shooting still images, set  (Camera) in the menu to other than [Auto] (pages 53 and 120).



1 Set the mode switch to or .

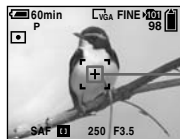


2 Press MENU.


The menu appears.

3 Select (Metering Mode) with , then select the desired metering mode with .

4 When selecting [Spot] in step 3, position the spot metering cross hair on one point of the subject you want to shoot.



Spot metering cross hair


- When using spot metering, to focus on the metering position, setting  (Focus) to [Center AF] is recommended (page 57).

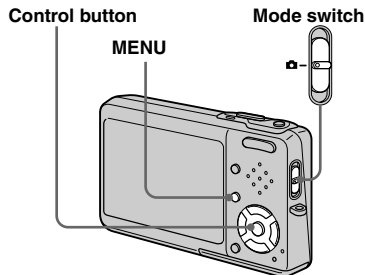
Shooting three images with the exposure shifted

— Exposure Bracket

The Exposure Bracket function records a series of three images with the exposure values automatically shifted. This lets you select the image with the appropriate exposure after recording when you are unable to shoot good pictures depending on the brightness of the subject.

Before operation

Set  (Camera) in the menu to other than [Auto] (pages 53 and 120).



1st image (shifted in the + direction)



2nd image (appropriate exposure for the camera)





3rd image (shifted in the - direction)





1 Set the mode switch to .

2 Press MENU.

The menu appears.

3 Select [Mode] (REC Mode) with , then select [Exp Brktg] with .

4 Select [BRK] (Bracket Step) with , then select the desired exposure adjustment value with .

$\pm 1.0\text{EV}$: Shifts the exposure value by plus or minus 1.0EV.

$\pm 0.7\text{EV}$: Shifts the exposure value by plus or minus 0.7EV.

$\pm 0.3\text{EV}$: Shifts the exposure value by plus or minus 0.3EV.

5 Shoot the image.

To return to normal mode

Select [Normal] in step **3**.

- You cannot use the flash in this mode.
- During shooting in this mode, the images are not displayed on the LCD screen. Compose the image before pressing the shutter button.
- The focus and white balance are adjusted for the first image, and these settings are also used for the other images.
- When the exposure is manually adjusted (page 60), the exposure is shifted based on the adjusted brightness.
- The recording interval is approximately 0.36 second.
- If the subject is too bright or too dark, you may be unable to shoot properly with the selected bracket adjustment value.
- You may not be able to shoot images in Exposure Bracket mode depending on the Scene Selection mode (page 43).

Adjusting color tones

— White Balance

You can set the white balance mode according to your shooting conditions. The apparent color of the subject is affected by the lighting conditions. When you want to fix the light source imaging conditions, or when the color of the entire image seems to be a bit unnatural, we recommend that you adjust the white balance setting.

Auto (No indicator)

Adjusts the white balance automatically. The factory setting is Auto.

☀ (Daylight)

Shooting outdoors, shooting night scenes, neon signs, fireworks or sunrise, or shooting just before and after sundown

☁ (Cloudy)

Shooting under a cloudy sky

💡 (Fluorescent)

Shooting under fluorescent lighting


💡 (Incandescent)

- Places where the lighting conditions change quickly
- Under bright lighting such as photography studios

⚡WB (Flash)

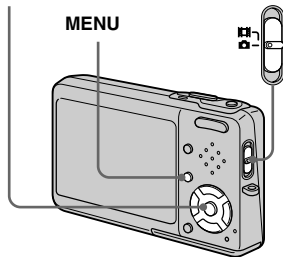
Adjusts the white balance only to the flash conditions



Before operation

When shooting still images, set  (Camera) in the menu to other than [Auto] (pages 53 and 120).



Control button

Mode switch




1 Set the mode switch to  or .

2 Press MENU.
The menu appears.

3 Select [WB] (White Bal) with , then select the desired setting with .

To reactivate auto adjustment

Select [Auto] in step **3**.


- Under fluorescent lights that flicker, the white balance adjustment function may not work correctly even though you select  (Fluorescent).
- When the flash strobes, the manual setting is canceled, and the image is recorded in [Auto] (except in ⚡WB (Flash) mode).
- Some settings cannot be selected depending on the Scene Selection mode (page 43).

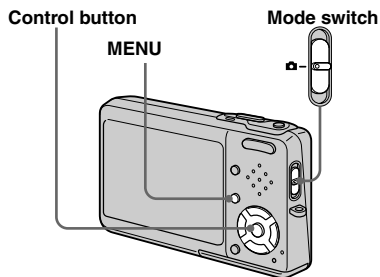
Adjusting the flash level

— Flash Level

You can adjust the amount of flash light.

Before operation

Set  (Camera) in the menu to other than [Auto] (pages 53 and 120).



1 Set the mode switch to .

2 Press MENU.

The menu appears.

3 Select [\pm] (Flash Level) with $\blacktriangle/\blacktriangleright$, then select the desired setting with $\blacktriangle/\blacktriangledown$.

\pm : Makes the flash level higher than normal.

Normal: Normal setting.

\pm : Makes the flash level lower than normal.

- You may not be able to set the flash level depending on the Scene Selection mode (page 43).

Shooting continuously

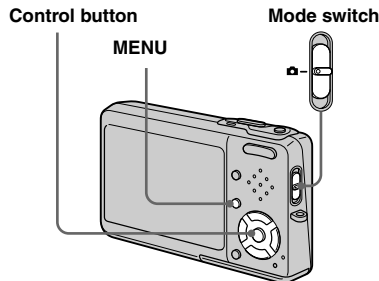
This mode is used for continuous shooting. The maximum number of images you can shoot per one shooting depends on the image size and image quality settings.

Speed Burst ()

You can shoot images with a short interval (approx. 0.33 second).

Burst ()

The shooting interval (approx. 0.83 seconds) becomes longer than Speed Burst, but even more images can be shot continuously.





- When the battery power decreases with use or the capacity of the "Memory Stick Duo" is full, recording stops even if you press and hold the shutter button.

1 Set the mode switch to .

2 Press MENU.

The menu appears.

3 Select [Mode] (REC Mode) with , then select [Speed Burst] or [Burst] with .

4 Shoot the image.

When you press and hold down the shutter button, the camera records the maximum number of images in succession. If you release the shutter button, shooting will stop at that point. When “Recording” disappears, you can shoot the next image.

The maximum number of images shot continuously

Speed Burst (Units: images)


Image size	Image quality	Fine	Standard
5M		4	4
3:2		4	4
3M		4	4
1M		4	4
VGA (E-Mail)		4	4

Burst (Units: images)

Image size	Image quality	Fine	Standard
5M		9	15
3:2		9	15
3M		13	24
1M		32	59
VGA (E-Mail)		100	100

To return to normal mode

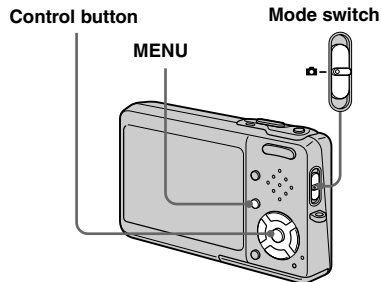
Select [Normal] in step **3**.

- The flash is set to  (No flash).
- When recording with the self timer, a series of maximum five images are recorded each time you press the shutter button.
- You may not be able to shoot images in succession depending on the Scene Selection mode (page 43).

Recording 16 frames in succession

— Multi Burst



This mode records 16 frames in succession each time you press the shutter button. This is convenient for checking your form in sports, for example.




1 Set the mode switch to .

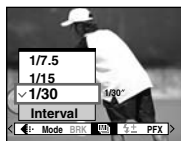
2 Press MENU.

The menu appears.

3 Select [Mode] (REC Mode) with , then select [Multi Burst] with .


- 4** Select  (Interval) with **◀/▶**, then select the desired frame interval with **▲/▼**.

You can choose the frame interval from [1/7.5], [1/15] or [1/30] second.



- 5** Shoot the image.

A continuous burst of 16 frames are recorded within a single still image (image size 1M).

- You cannot use the following functions in Multi Burst mode:
 - Smart zoom
 - Flash
 - Inserting the date and time
- When  (Camera) in the menu is set to [Auto], frame interval is automatically set to [1/30] second.
- See page 72 to play back images recorded in Multi Burst mode using this camera.
- For the number of images that can be recorded in Multi Burst mode, see page 119.
- You may not be able to shoot images in Multi Burst mode depending on the Scene Selection mode (page 43).

Shooting with special effects

— Picture Effect

You can digitally process images to obtain special effects.

B&W




The picture is monochrome (black and white).

Sepia



The picture is sepia-toned like an old photograph.

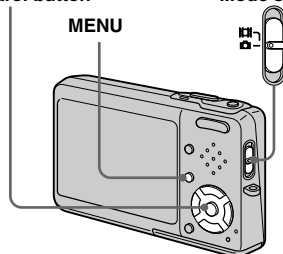
Before operation



When shooting still images, set  (Camera) in the menu to other than [Auto] (pages 53 and 120).

Control button

MENU

Mode switch



- 1** Set the mode switch to  or .

- 2** Press MENU.
The menu appears.

- 3** Select [PFX] (P. Effect) with **◀/▶**, then select the desired mode with **▲/▼**.

- 4** Shoot the image.

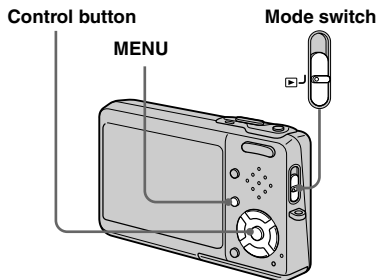
To cancel Picture Effects

Select [Off] in step **3**.

- Picture Effect setting is not maintained when the power is turned off.

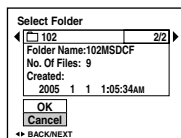
Selecting the folder and playing back images

Select the folder that images you want to play back are stored.



- 1 Set the mode switch to .
- 2 Press MENU.
The menu appears.
- 3 Select (Folder) with , then press .

- 4 Select the desired folder with /



- 5 Select [OK] with , then press .

To cancel the selection

In step 5, select [Cancel].

When multiple folders are created in the "Memory Stick Duo"

When the first or last image in the folder is displayed, the following indicators appear on the screen.

: Moves to the previous folder.

: Moves to the next folder.

: Moves to both the previous and next folders.

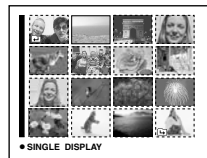
Single screen



Index (nine-image) screen



Index (sixteen-image) screen

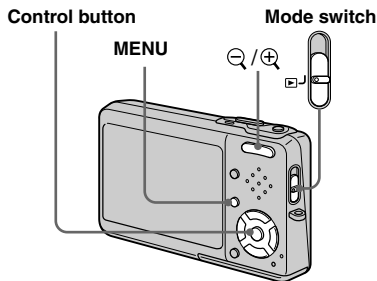


- When no images are stored in the folder, "No file in this folder" appears.





Enlarging a portion of a still image

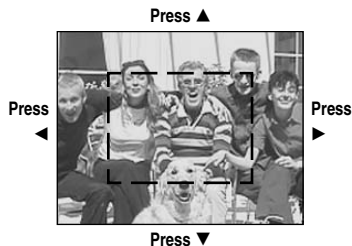
You can enlarge a part of an image up to five times the original size.

You can also record the magnified image as a new file.



Enlarging an image — Playback zoom

- 1 Set the mode switch to .
- 2 Display the image to be enlarged with /
- 3 Press  (playback zoom) to zoom in on the image.
- 4 Select the desired portion of the image with /




- ▲: To view more of the top of the image
- ▼: To view more of the bottom of the image
- ◀: To view more of the left side of the image
- ▶: To view more of the right side of the image

- 5 Adjust the image size with the /



To cancel playback zoom

Press .

- You cannot use playback zoom for movies and Multi Burst images.
- If you press  (playback zoom) while a non-enlarged image is displayed, the LCD screen switches to the index screen. (page 45)
- You can enlarge the images displayed with the Quick Review function (page 32) by performing steps **3** to **5**

Recording an enlarged image — Trimming

1 Press MENU after playback zoom.

The menu appears.

2 Select [Trimming] with ►, then press ●.

3 Select the image size with ▲/▼, then press ●.

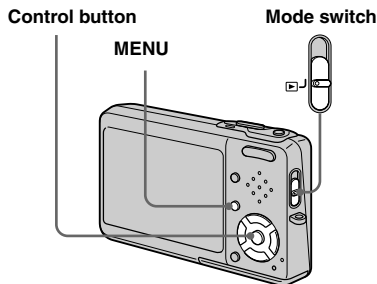
The image is recorded, and the image on the LCD screen returns to the normal size after recording.

- The trimmed image is recorded as the newest file in the selected recording folder, and the original image is retained.
- The quality of trimmed images may deteriorate.
- You cannot trim to an image size of 3:2.
- You cannot trim images displayed with Quick Review.

Playing back successive images

— Slide Show

You can play back recorded images in order. This function is useful for checking your images or for presentations, etc.



1 Set the mode switch to [Slide Show].

2 Press MENU.

The menu appears.

3 Select [Slide Show] with ▲/▼, then press ●.

Set the following items with ▲/▼/◀/▶.

Interval

3 sec/5 sec/10 sec/30 sec/1 min

Image

Folder: Plays back all images in the selected folder.

All: Plays back all images stored in the "Memory Stick Duo".

Repeat

On: Plays back images in a continuous loop.

Off: After all the images have been played back, the slide show ends.

4 Select [Start] with ▼/▶, then press ●.

The slide show begins.

To cancel the slide show setting

Select [Cancel] in step 3.

To stop slide show playback

Press ●, select [Exit] with ►, then press ● again.

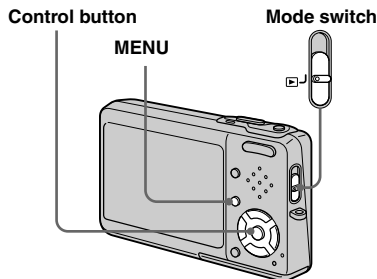
To skip to the next/previous image during the slide show













Press ► (next) or ◀ (previous).

- The interval settings time are just guidelines, so it may vary depending on the image.


Rotating still images

You can rotate an image recorded in portrait orientation and display it in landscape orientation.



- 1 Set the mode switch to , and display the image to rotate.
- 2 Press MENU.
The menu appears.
- 3 Select  (Rotate) with / , then press .
- 4 Select  with , then rotate the image with / .
- 5 Select [OK] with / , then press .

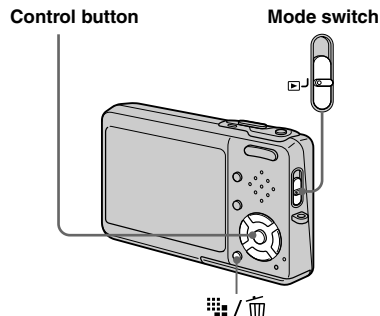
To cancel rotation

Select [Cancel] in step **4** or **5**, then press .

- You cannot rotate protected images and movies and Multi Burst images.
- You may not be able to rotate images shot with other cameras.
- When viewing images on a computer, the image rotation information may not be reflected depending on the application software.

Playing back images shot in Multi Burst mode

You can play back Multi Burst images continuously or play them back frame by frame. This function is used for checking the image.



- When Multi Burst images are played back on a computer or on a camera without the Multi Burst function, the 16 frames you shot will be displayed at the same time as part of one image.
- You cannot cut the Multi Burst image.

Playing back continuously



1 Set the mode switch to .

2 Select the Multi Burst image with / .

The selected Multi Burst image is played back continuously.



To pause playback

Press . To resume playback, press  again. The playback starts from the frame displayed on the LCD screen.

Playing back frame by frame

1 Set the mode switch to .

2 Select the Multi Burst image with / .



The selected Multi Burst image is played back continuously.



3 Press  when the desired frame is displayed.

“Step” appears.




4 Advance the frame with / .

: A next frame is displayed. When you keep and press , the frame advances.

: A previous frame is displayed. When you keep and press , the frame advances in the reverse direction.



To return to the normal playback


Press  in step **4**. The playback starts from the frame displayed on the LCD screen.

To delete shot images

When using this mode, you cannot delete only certain frames. When you delete images, all 16 of the frames are deleted at the same time.

1 Display the desired Multi Burst image to delete.

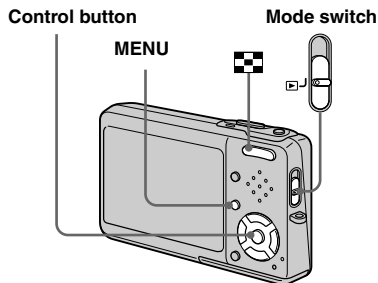
2 Press  /  (Delete).

3 Select [Delete], then press . All of the frames are deleted.

Protecting images








— Protect


This function protects images against accidental erasure.






- Note that formatting the “Memory Stick Duo” erases all the data in the “Memory Stick Duo” even if images are protected, and these images cannot be recovered.
- It may take some time to protect the images.

In single-image mode



- 1** Set the mode switch to .
- 2** Display the image you want to protect with / .
- 3** Press MENU.
The menu appears.
- 4** Select  (Protect) with / , then press .

The displayed image is protected. The  (protect) indicator appears on the image.






- 5** To continue and protect other images, select the desired image with / , then press .













To cancel the protection


Press  again in step **4** or **5**. The  indicator disappears.

In index mode

- 1** Set the mode switch to , then press  (index) to display the index (nine-image) screen.

Press  (Index) twice to display a sixteen-image index screen.

- 2** Press MENU.
The menu appears.
- 3** Select  (Protect) with / , then press .
- 4** Select [Select] with / , then press .
- 5** Select the image you want to protect with / / / , then press .

The green  indicator appears on the selected image.



- 6** Repeat step **5** to protect other images.
- 7** Press MENU.

- 8** Select [OK] with **▶**, then press **●**.

The **⏏** indicator turns white. The selected images are protected.

To exit the Protect function

Select [Cancel] in step **4** or select [Exit] in step **8**, then press **●**.

To cancel individual protection

Select the image to be unprotected with **▲/▼/◀/▶** in step **5**, then press **●**. The **⏏** indicator turns gray. Repeat this operation for all images that are to be unprotected. Press MENU, select [OK], and then press **●**.

To protect all images in the folder

Select [All In This Folder] in step **4**, and press **●**. Select [On], then press **●**.

To cancel protection of all images in the folder

Select [All In This Folder] in step **4**, and press **●**. Select [Off], then press **●**.

Changing image size

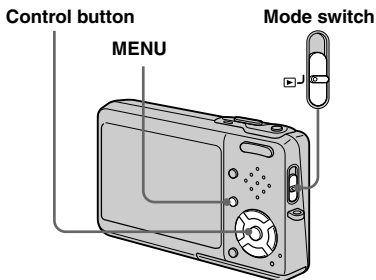
— Resize

You can change the image size of a recorded image, and save it as a new file.

You can resize to the following sizes:

5M, 3M, 1M, VGA

The original image is retained even after resizing.



- 1** Set the mode switch to **▶**.
- 2** Display the image you want to resize with **◀/▶**.
- 3** Press MENU.
The menu appears.
- 4** Select **⏏** (Resize) with **◀/▶**, then press **●**.

- 5** Select the desired size with **▲/▼**, then press **●**.

The resized image is recorded in the recording folder as the newest file.

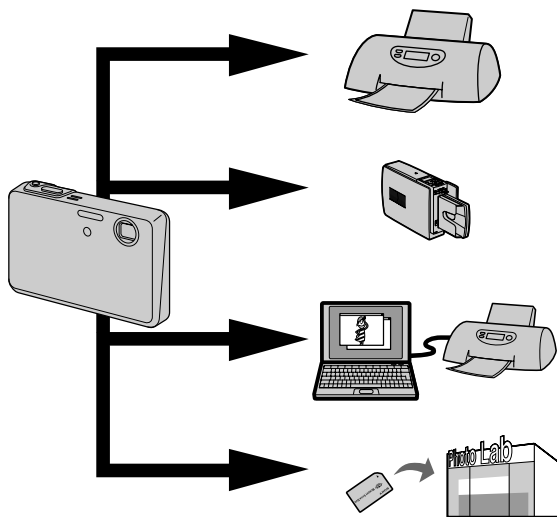
To cancel resizing

Select [Cancel] in step **5**.

- You cannot change the size of movies or Multi Burst images.
- When you change from a small size to a large size, the image quality deteriorates.
- You cannot resize to an image size of 3:2.
- When you resize a 3:2 image, the upper and lower black portions will be displayed on the image.

Printing still images

You can print images shot with your camera by the following methods.



Direct printing (PictBridge compatible printer) (page 77)

You can print by connecting the camera directly to a PictBridge compatible printer.

Direct printing ("Memory Stick" compatible printer)

You can print using a "Memory Stick" compatible printer. See the users manual supplied with the printer for details.

Printing with a computer (page 101)

You can print images that have been loaded to a computer using the "PicturePackage" software included on the CD-ROM supplied with your camera. See the users manual supplied with the printer for the printer operation method.

Printing at a shop (page 81)

Just bring the "Memory Stick Duo" and the Memory Stick Duo Adaptor to a print service shop. You can also mark the images you want to print beforehand with print marks.


Direct printing

Even if you do not have a computer, you can easily print images shot using your camera by connecting the camera to a PictBridge compliant printer. For preparation, you only set the USB connection on the Setup screen and connect the camera mounted in the Cyber-shot Station to the printer with the USB cable.

Using a PictBridge compliant printer easily prints the index print*.



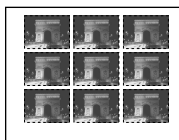
* An index print function may not be provided depending on a printer.

- Using the AC Adaptor is recommended to prevent the power from turning off partway through printing.
- You cannot print movies.
- When an error notification is received from the connected printer, the  indicator flashes for approximately five seconds. Check the connected printer.

Single print



Index print



- If you arrange the same image side by side, select [This image] in single-image mode, then set [Index] to [On] (page 79).
- The number of images printed on a single index print differs according to the printer.

Preparing the camera

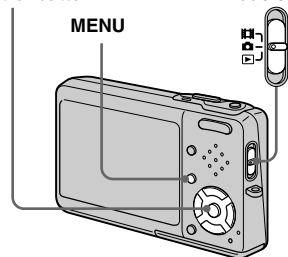
Set the USB mode on the camera to connect the camera with a printer.


Before operation

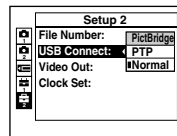
Set the menu to the Setup screen (pages 54 and 124).

Control button

Mode switch



- 1** Select  (Setup 2) with \blacktriangledown , then select [USB Connect] with $\blacktriangle/\blacktriangledown/\blacktriangleright$.
- 2** Select [PictBridge] with $\blacktriangleright/\blacktriangle$, then press \bullet .

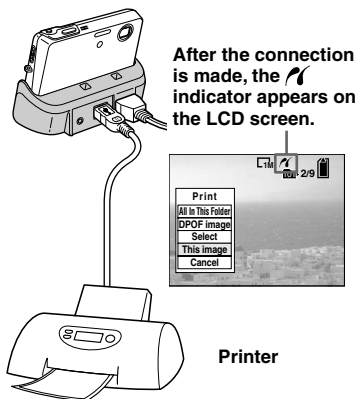


The USB mode is set.

Connecting the camera to the printer

Connect the camera to the Cyber-shot Station. Then, connect the Ψ (USB) jack on the Cyber-shot Station and the USB jack on the printer with the USB cable (supplied). Turn on the camera and the printer.

The camera turns to playback mode regardless of the mode switch position, and an image in the selected playback folder and the print menu appear on the LCD screen.



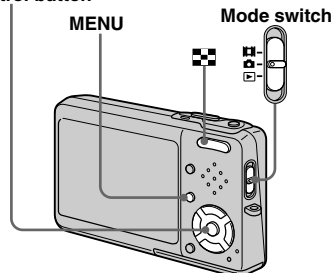
When [USB Connect] is not set to [PictBridge] on the Setup screen

Even if you turn on the camera, you cannot use the PictBridge function. Disconnect the USB cable from the Cyber-shot Station and set [USB Connect] to [PictBridge]. (page 77)

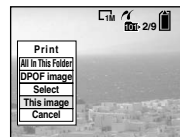
Printing in single-image mode

When you connect the camera and a printer, the print menu appears.

Control button



- 1 Select the desired printing type with $\blacktriangle/\blacktriangledown$, then press \bullet .



All In This Folder

Prints all the images in the folder.

DPOF image

Prints all the images with the mark (page 81) regardless of the displayed image.

Select

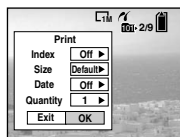
Selects the images in order. Prints all the selected images.

- 1 Select the image you want to print with **◀▶**, then press **●**.
The **✓** mark appears on the selected image.
- 2 Select [Print] with **▼**, then press **●**.

This image

Prints the currently displayed image.

2 Set the print setting with **▲▼/◀▶**.



Index

Select [On] to print index-images.

Size

Selects the desired paper size.

Date

To insert the date and time on images, select [Date] or [Day&Time].

- If you select [This image] in step **1** and print index-images, the same images are arranged side by side.
- When you select [Date] for [Date] setting, the date will be inserted in the order set in “Setting the date and time” (page 21). Date function may not be provided depending on a printer.
- Setting items the printer does not support cannot be displayed.

3 Select [Quantity] with **▼**, select the number of sheets with **◀▶**.

When [Index] is set to [Off]: the number of sheets of the selected image.


When [Index] is set to [On]: the number of sheets of index-images.

When [This image] is selected in step **1**, this is the number of the same image that can be arranged on a single sheet.

- Depending on the number of index-images, it may not be possible to arrange all of the images on a single sheet.

4 Select [OK] with **▼/▶**, then press **●**.

The image is printed.

Do not disconnect the USB cable while the  (Not disconnect USB cable) indicator appears on the LCD screen.



To cancel printing

Select [Cancel] in step **1** or select [Exit] in step **4**.


To print other images

Select the image with ◀/▶ after step **4**, then select [Print].

Printing in index mode

If you connect your camera to the printer, the print menu appears. Press [Cancel] to exit the print menu.

1 Press (Index) to display the index (nine-image) screen.

Press  (Index) twice to display a sixteen-image index screen.

2 Press MENU.

The menu appears.

3 Select (Print) with ▶, then press ●.

4 Select the desired printing type with ◀/▶, then press ●.



Select

Selects the images in order. Prints all the selected images.


1 Select the image you want to print with ▲/▼/◀/▶, then press ●.

The ✓ mark appears on the selected image.

- Repeat this step to print other images.

2 Press MENU.

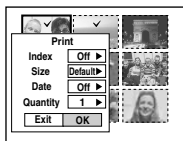
DPOF image

Prints all the images with the  mark (page 81) regardless of the displayed image.

All In This Folder

Prints all the images in the folder.

- 5** Set the print setting with ▲/▼/◀/▶.



Index

Select [On] to print index-images.

Size

Selects the desired paper size.

Date

To insert the date and time on images, select [Date] or [Day&Time].

- When you select [Date] for [Date] setting, the date will be inserted in the order set in "Setting the date and time" (page 21). Date function may not be provided depending on a printer.

- 6** Select [Quantity] with ▼, select the number of sheets with ◀/▶.


When [Index] is set to [Off]: the number of sheets of the selected image.

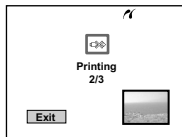
When [Index] is set to [On]: the number of sheets of index-images.

- Depending on the number of index-images, it may not be possible to arrange all of the images on a single sheet.

- 7** Select [OK] with ▼/▶, then press ●.

The image is printed.

Do not disconnect the USB cable while the  (Not disconnect USB cable) indicator appears on the LCD screen.



To cancel printing

Select [Cancel] in step **4** or select [Exit] in step **7**.

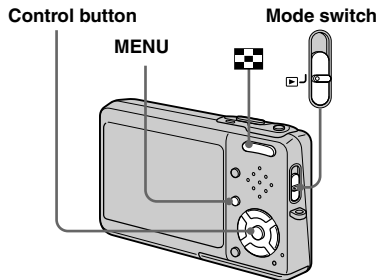
Having images printed at a shop

Note the following items when having images printed at a shop.

- Contact the print service shop to determine what "Memory Stick" types are supported.
- When using a print service shop that does not support "Memory Stick", copy the images to a CD-R, etc., and bring that to the shop instead.
- Be sure to also bring the Memory Stick Duo Adaptor to the shop.
- Be sure to make a backup copy of the data before using a print service shop.

Marking print marks

Marking images you want to have printed beforehand with print marks is convenient when having images printed at a print service shop.



- You cannot mark movies.
- When you mark images shot in Multi Burst mode, all the images are printed on one sheet divided into 16 panels.
- You cannot set the number of prints.

Marking print marks in single-image mode

- 1** Set the mode switch to .
- 2** Display the image you want to mark with .
- 3** Press MENU.
The menu appears.
- 4** Select DPOF (DPOF) with , then press .

The mark is marked on the displayed image.



- 5** To continue and mark other images, display the desired image with , then press .

To unmark the mark

Press again in step **4** or **5**. The mark disappears.

Marking print marks in index mode

- 1** Set the mode switch to , then press (Index) to display the index (nine-image) screen.

Press (Index) twice to display a sixteen-image index screen.

- 2** Press MENU.
The menu appears.
- 3** Select DPOF (DPOF) with , then press .
- 4** Select [Select] with , then press .
- 5** Select the image you want to mark with , then press .



The green mark appears on the selected image.



6 Repeat step **5** to mark other images.

7 Press MENU.

8 Select [OK] with ►, then press ●.

The  mark turns white. The  mark setting is completed.

To unmark marks

Select the images to be unmarked with ▲/▼/◀/▶ in step **5**, then press ●.

To unmark all the marks in the folder

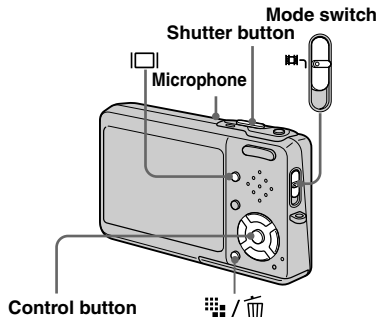
Select [All In This Folder] in step **4**, then press ●. Select [Off], then press ●.

To exit the mark function

Select [Cancel] in step **4** or select [Exit] in step **8**.

Shooting movies

You can shoot movies with sound using your camera.



1 Set the mode switch to

2 Press / (Image Size).
The Image Size setup appears.

3 Select the desired size with / .

You can choose from [640(Fine)], [640(Standard)] and [160].

- [640(Fine)] can be recorded only on “Memory Stick PRO Duo”.

4 Press the shutter button fully down.

“REC” appears on the screen and the camera starts recording the image and sound.



- Recording stops when the “Memory Stick Duo” is full.

5 Press the shutter button fully down again to stop recording.

Indicators during shooting

The screen indicators are not recorded.
Each time you press , the status of the LCD screen changes as follows: Indicators off → LCD backlight off → Indicators on.
A histogram is not displayed.
For a detailed description of the indicators, see page 135.

Shooting close-ups (Macro)

Set the mode switch to

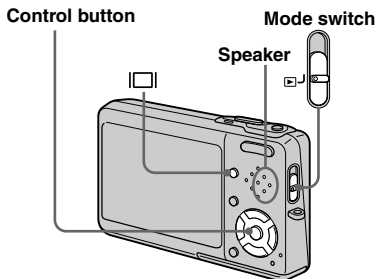
Using the self-timer

Set the mode switch to



- Do not touch the microphone during shooting movies.
- You cannot use the following functions during shooting movies:
 - Changing the zoom scale
 - Flash
 - Inserting the date and time
- When you set the image size to [640(Fine)] while connecting the A/V connecting cable (supplied) to the A/V OUT (MONO) jack, the subject does not appear on the LCD screen. The LCD screen turns blue.
- For the recording time in each movie mode, see page 119.

Viewing movies on the LCD screen

You can view movies on the LCD screen with sound from the speaker.



1 Set the mode switch to .


2 Select the desired moving image with / .

Movies with the image size [640(Fine)] or [640(Standard)] are displayed on the full screen.



- Movies with the image size [160] are displayed a size smaller.

3 Press .

The movie and sound are played back. During playback,  (playback) appears on the screen.





Playback bar




To stop playback

Press  again.


To adjust the volume

Press /  to adjust the volume.

To advance or rewind the movie

Press  (cue) or  (rev) during playback. To return to the normal playback, press .

Indicators during viewing movies

Each time you press , the status of the screen changes as follows: Indicators off → LCD backlight off → Indicators on.

A histogram is not displayed.

For a detailed description of the indicators, see page 137.

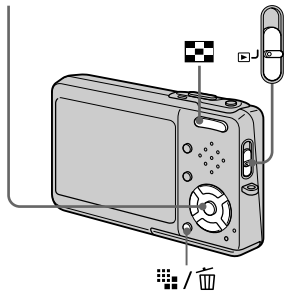
- The procedure for viewing movies on a TV is the same as that for viewing still images (page 46).
- The moving images recorded using earlier Sony models may be also displayed a size smaller.

Deleting movies

You can delete unwanted movies.

Control button

Mode switch



- You cannot delete protected movies.
- Note that you cannot restore deleted movies.


In single-image mode

- 1** Set the mode switch to .
- 2** Display the movie you want to delete with / .
- 3** Press / (Delete).
The movie has not yet been deleted at this point.
- 4** Select [Delete] with , then press .
- 5** To continue and delete other movie, display the movie you want to delete with / , then repeat step **4**.

To cancel deletion

Select [Exit] in step **4** or **5**.

In index mode

- 1** Set the mode switch to , then press (Index) to display an index (nine-image) screen.
Press (Index) twice to display a sixteen-image index screen.
 - 2** Press / (Delete).
 - 3** Select [Select] with / , then press .
 - 4** Select the movie you want to delete with / / / , then press .
- The green (Delete) indicator appears on the selected movie.
- 
- The movie has not yet been deleted at this point.
- 5** Repeat step **4** to delete other movies.
 - 6** Press / (Delete).

- 7** Select [OK] with **►**, then press **●**.

The message “Access” appears, and the movie has been deleted.

To cancel deletion

Select [Exit] in step **3** or **7**.

- To delete all the images in the folder, see page 51.

Cutting movies

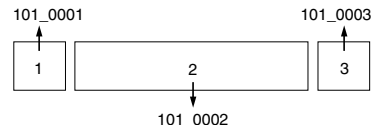
You can cut movies, or delete unnecessary portions of movies. Cutting or deleting movies is the recommended function to use when the “Memory Stick Duo” capacity is insufficient, or when you attach movies to your e-mail messages.

Note that the original movie is deleted when you cut it.

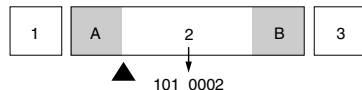
The file numbers assigned when movies are cut

The cut movies are assigned new numbers and recorded as the newest files in the selected recording folder. The original movie is deleted, and that number is skipped.

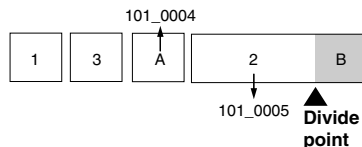
<Example> Cutting a movie numbered 101_0002



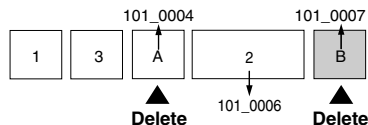
1. Cutting scene A.



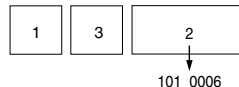
2. Cutting scene B.

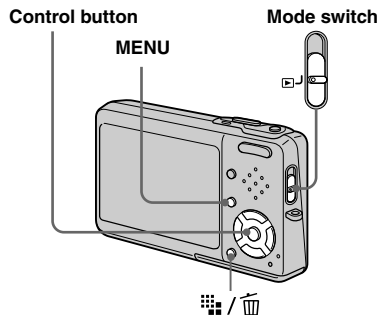










3. Deleting scenes A and B if they are unnecessary.




4. Only the desired scenes remain.

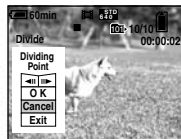










- 1** Set the mode switch to .
 - 2** Select the movie you want to cut using / .
 - 3** Press MENU.
The menu appears.
 - 4** Select  (Divide) with , then press . Next, select [OK] with , then press .
- The playback of the movie starts.



5 Decide on a cutting point.

Press the center  at the desired cutting point.



When you want to adjust the cutting point, use [/ ] (frame rewind/ forward) and adjust the cutting point using / . If you want to change the cutting point, select [Cancel]. The playback of the movie starts again.

- 6** When you have decided on a cutting point, select [OK] with , and press .

- 7** Select [OK] with , then press .
- The movie is cut.

To cancel cutting

Select [Exit] in step **5** or **7**. The movie appears on the screen again.

- You cannot cut the following images.
 - Still image
 - Movies not long enough to cut (about more than two seconds)
 - Protected movies
- You cannot restore files once you cut them.
- The cut movies are recorded as the newest files in the selected recording folder.

Copying images to your computer

— For Windows users

Recommended computer environment

OS: Microsoft Windows 98, Windows 98SE, Windows 2000 Professional, Windows Millennium Edition, Windows XP Home Edition, or Windows XP Professional
The above OS must be installed at the factory. Operation is not assured in an environment upgraded to the operating systems described above or in a multi-boot environment.

CPU: MMX Pentium 200 MHz or faster

USB connector: Provided as standard

Display: 800 × 600 dots or more
High Color (16-bit color, 65,000 colors) or more

- This camera is compatible with Hi-Speed USB (USB 2.0 compliant).
- Connecting with a USB interface that is compatible with Hi-Speed USB (USB 2.0-compliant) allows advanced transfer (high-speed transfer).

- If you connect two or more USB equipment to a single computer at the same time, some equipment, including your camera, may not operate depending on the type of USB equipment.
- Operations are not guaranteed when using a USB hub.
- Operations are not guaranteed for all the recommended computer environments mentioned above.

USB mode

There are two modes for a USB connection when connecting with a computer, [Normal] and [PTP]* modes. The default setting is the [Normal] mode. This section describes the [Normal] mode as an example.

* For a details on the PTP connection, see page 126.

Communication with your computer

When your computer resumes from the suspend or sleep mode, communication between your camera and your computer may not recover at the same time.

When a USB connector is not provided on your computer

When neither a USB connector nor a “Memory Stick” slot is provided, you can copy images using an additional device. See the Sony Website for details.
<http://www.sony.net/>

Contents of the CD-ROM

■ USB Driver

This driver is needed in order to connect the camera to a computer.
When using Windows XP, you need not install the USB driver.

■ Picture Package

This application is used to transfer images from the camera to a computer easily. It also allows you to utilize the various functions.
When you install “Picture Package,” the USB driver is also installed at the same time.

- The required operations may differ depending on your OS.
- **Close down all applications running on the computer before installing the USB driver and application.**
- When using Windows XP or Windows 2000, log on as Administrator.

Installing the USB driver



When using Windows XP, you need not install the USB driver.

Once the USB driver is installed, you need not install the USB driver.

- 1 Turn on your computer, and insert the CD-ROM (supplied) into the CD-ROM drive.

Do not connect your camera to your computer at this time.

The install menu screen appears.

If it does not appear, double-click  (My Computer) →  (PICTUREPACKAGE) in that order.

- When also using the supplied image utility software “Picture Package”, click [Picture Package]. The USB driver will be installed when “Picture Package” is installed (page 97).
- When the computer is in use, shut down all application software before you install the USB driver.

- 2 Click [USB Driver] on the title screen.



The “InstallShield Wizard” screen appears.

- 3 Click [Next].



The USB driver installation starts. When the installation is completed, the screen informs you of completion.

- 4 Click [Yes, I want to restart my computer now], then click [Finish].

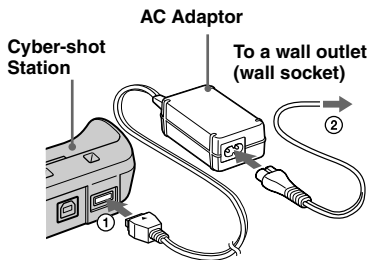


Your computer restarts. Then, you can establish USB connection.

- 5 Remove the CD-ROM.

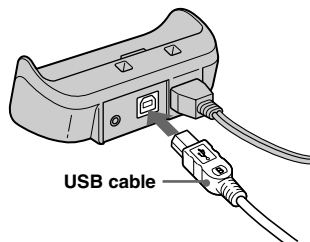
Connecting the camera to your computer

- 1** Turn on your computer.
- 2** Insert the “Memory Stick Duo” with the images you want to copy into the camera.
- 3** Connect the Cyber-shot Station (supplied) and the AC Adaptor (supplied), and plug the adaptor into a wall outlet (wall socket).

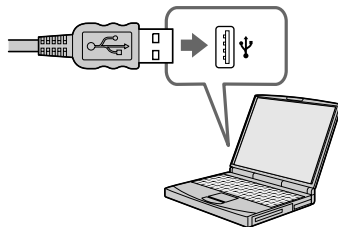


- When you copy images to your computer using the battery pack, copying may be failed or cause data corruption by battery shutoff. We recommend that you use the AC Adaptor.

- 4** Connect the USB cable to the Ψ (USB) jack of the Cyber-shot Station.

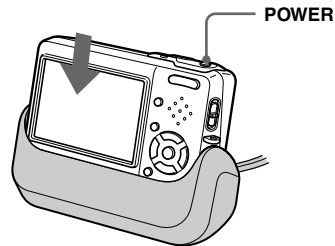


- 5** Connect the USB cable to your computer.

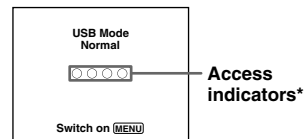


- When using Windows XP, the AutoPlay wizard automatically appears on the desktop. Proceed to page 93.

- 6** Connect the camera to the Cyber-shot Station and turn on the camera.



- Make sure the camera is securely connected to the Cyber-shot Station.



“USB Mode Normal” appears on the LCD screen of the camera. When a USB connection is established for the first time, your computer automatically runs the used program to recognize the camera. Wait for a while.

* During communication, the access indicators turn red. Do not operate the computer until the indicators turn white.

- If “USB Mode Normal” does not appear in step **6**, press MENU, select [USB Connect], and set it to [Normal].
- **Do not remove the camera from the Cyber-shot Station during USB connection, as the image data may be destroyed. To end the USB connection, see the note **1**.**


1 Disconnecting the USB cable from your computer, removing the “Memory Stick Duo” from your camera or turning off the camera during USB connection

For Windows 2000, Me, or XP users

- 1** Double-click  on the tasktray.



Double-click here

- 2** Click , then click [Stop].
- 3** Confirm the device on the confirmation window, then click [OK].
- 4** Click [OK].
Step **4** is unnecessary for Windows XP users.
- 5** Disconnect the USB cable, remove the “Memory Stick Duo”, or turn off the camera.

For Windows 98 or 98SE users

Confirm that the access indicators (page 91) on the screen are turned white and carry out only step **5** above.

Copying images

– Windows 98/98SE/2000/Me

- 1** Double-click [My Computer], then double-click [Removable Disk].

The contents of the “Memory Stick Duo” inserted in your camera appear.

- This section describes an example of copying images to the “My Documents” folder.
- When the “Removable Disk” icon is not shown, see page 93.
- When using Windows XP, see page 93.

- 2** Double-click [DCIM], then double-click the folder that the image files you want to copy are stored.

- 3** Right-click the image file to display the menu, then select [Copy] from the menu.

- 4** Double-click the [My Documents] folder and right-click on the “My Documents” window to display the menu, then select [Paste] from the menu.

The image files are copied to the “My Documents” folder.



When an image with the same file name exists in the copy destination folder

The overwrite confirmation message appears. When you overwrite the existing image with the new one, the original file data is deleted.

To change the file name

To copy an image file to the computer without overwriting, change the file name to the desired name and then copy the image file. However, note that if you change the file name, you may not be able to play back that image with your camera. To play back images with the camera, perform the operation on page 97.

When a removable disk icon is not shown

- 1 Right-click [My Computer] to display the menu, then click [Properties]. The “System Properties” screen appears.
- 2 Display [Device Manager].
 - ① Click [Hardware].
 - ② Click [Device Manager].
 - For Windows 98, 98SE, Me users, step ① is unnecessary. Click the [Device Manager] tab.
- 3 If  [Sony DSC] is displayed, delete it.
 - ① Right-click  [Sony DSC].
 - ② Click [Uninstall].

The “Confirm Device Removal” screen appears.

 - For Windows 98, 98SE, Me users, click [Remove].
 - ③ Click [OK].

The device is deleted.

Try the USB driver installation again using the CD-ROM (page 90).

– Windows XP

Copying images using the Windows XP AutoPlay wizard

- 1 **Make a USB connection (page 91). Click [Copy pictures to a folder on my computer using Microsoft Scanner and Camera Wizard], then click [OK].**
The “Scanner and Camera Wizard” screen appears.
- 2 **Click [Next].**
The images stored on the “Memory Stick Duo” are displayed.
- 3 **Click the checkbox of images that you do not want to copy to your computer to remove the checkmark, then click [Next].**
The “Picture Name and Destination” screen appears.
- 4 **Select a name and destination for your pictures, then click [Next].**
Image copying starts. When the copying is completed, the “Other Options” screen appears.

- 5** Select [Nothing. I'm finished working with these pictures], then click [Next].

The “Completing the Scanner and Camera Wizard” screen appears.

- 6** Click [Finish].

The wizard closes.

- To continue copying other images, follow the procedure given under **4** on page 92 to disconnect the USB cable and reconnect it. Then, perform the procedure from step **1** again.

Viewing the images on your computer

- 1** Click [Start], then click [My Documents].

The “My Documents” folder contents are displayed.

- This section describes the procedure for viewing copied images in the “My Documents” folder.
- When not using Windows XP, double-click [My Documents] on the desktop.

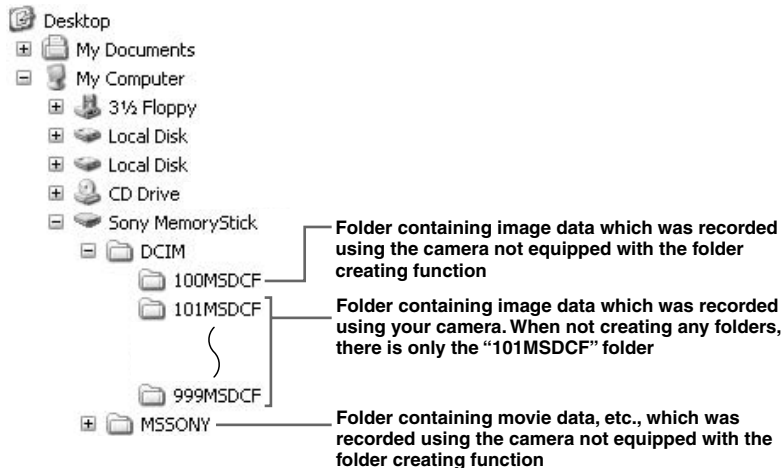
- 2** Double-click the desired image file.

The image is displayed.

Image file storage destinations and file names

The image files recorded with your camera are grouped as folders in the “Memory Stick Duo”.

Example: when viewing folders on Windows XP



- You cannot record any images to “100MSDCF” or “MSSONY” folders. The images in these folders are available only for viewing.
- For more information about the folder, see pages 55, 69.

Folder	File name	File meaning
101MSDCF to 999MSDCF	DSC0□□□□.JPG	<ul style="list-style-type: none"> Still image files shot in <ul style="list-style-type: none"> Normal mode (page 29) Exposure Bracket mode (page 63) Burst mode (page 66) Multi Burst mode (page 67)
	MOV0□□□□.MPG	<ul style="list-style-type: none"> Movie files (page 84)
	MOV0□□□□.THM	<ul style="list-style-type: none"> Index image files recorded simultaneously in movie mode (page 84)

- stands for any number within the range from 0001 to 9999.
- The numerical portions of a movie file recorded in movie mode and its corresponding index image file are the same.

Viewing image files once copied to a computer with your camera

When an image file copied to a computer no longer remains in a “Memory Stick Duo”, you can view that image again on your camera by copying the image file in the computer to a “Memory Stick Duo”.

- Step **1** is not necessary when the file name set with your camera has not been changed.
- You may be unable to play back some images depending on the image size.
- When an image file has been processed by a computer or when the image file was recorded using a model other than your camera, playback on your camera is not guaranteed.
- When the overwrite confirmation message appears, enter a different number in step **1**.
- When there is no folder, first create a folder with your camera and then copy the image file (page 55).

- 1** Right-click the image file, then click [Rename]. Change the file name to “DSC0□□□□”.

Enter a number from 0001 to 9999 for □□□□.

- An extension may be displayed depending on the computer settings. The extension for still images is JPG, and the extension for movies is MPG. Do not change the extension.

- 2** Copy the image file to the “Memory Stick Duo” folder.

- ① Right-click the image file, then click [Copy].
- ② Select and double-click the [DCIM] folder from [Removable Disk] or [Sony MemoryStick] in [My Computer].
- ③ Right-click the [□□□MSDCF] folder in the [DCIM] folder and click [Paste]. □□□ stands for any number within the range from 100 to 999.

Installing “Picture Package” and “ImageMixer VCD2”

“Picture Package” is only for Windows computers.

You can use the “Picture Package” software on your Windows computer to compile the images shot with your camera. When you install “Picture Package,” the USB driver is also installed at the same time.

- When the computer is in use, shut down all application software before you install “Picture Package.”

For computer environment

See page 89 for the basic Windows operating environment. Other system requirements are as follows.

Software: Macromedia Flash Player 6.0 or later, Windows Media Player 7.0 or later, DirectX 9.0b or later

Sound card: 16-bit stereo sound card with speakers

Memory: 64 MB or more (128 MB or more is recommended.)

Hard Disk: Disk space required for installation: approximately 500 MB

Display: Video card (Direct Draw driver compliant) with 4 MB of VRAM

- When automatically creating slide shows (page 101), a Pentium III 500 MHz or faster CPU is required.
- When using “ImageMixer VCD2,” a Pentium III 800 MHz or faster CPU is recommended.
- This software is compatible with DirectX technology. “DirectX” must be installed for use.
- A separate environment for operating the recording device is required in order to write to CD-Rs.

1 Turn on your computer, and insert the CD-ROM (supplied) into the CD-ROM drive.

The installation menu screen appears.

- If you have not yet installed the USB driver (page 90), do not connect the camera to the computer before you install the “Picture Package” software (except for Windows XP).

2 Click [Picture Package/ ImageMixer VCD2].



“Choose Setup Language” screen appears.

3 Select the desired language, then click [Next].



- This section describes the English screen.

4 Click [Next].

The “License Agreement” screen appears. Read the agreement carefully. If you accept the terms of the agreement, check the “I accept the terms of the license agreement” checkbox and click [Next].



5 Click [Next].



6 Click [Install] on the “Ready to Install the Program” screen.

The installation starts.



When the installation is completed, the “Welcome to setup for ImageMixer VCD2” screen appears.

- 7** Click [Next], then follow the instructions.



If the “Welcome to setup for Direct X” screen appears after you install the application software, follow the instructions.

- 8** Confirm if the checkbox of “Yes, I want to restart my computer now” is checked, then click [Finish].

Your computer restarts.



The shortcut icons of “Picture Package Menu” and “Picture Package destination Folder” are displayed.

- 9** Remove the CD-ROM.

Copying images using “Picture Package”

Connect the camera and your computer with the USB cable.


“Picture Package” starts up automatically and the images are copied to the computer automatically. After the images are copied, “Picture Package Viewer” starts up and the images copied are displayed.



- Normally “Picture Package” and “Date” folders are created inside the “My Picture” folder, and all of the image files recorded with the camera are copied into these folders.
- If “Picture Package” cannot copy images automatically, start up “Picture Package Menu” and check [Settings] in [Copy automatically].

Using “Picture Package”

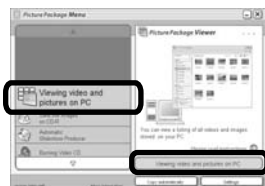
Start up the [Picture Package Menu] on the desktop to use the various functions.

- The initial screen may differ depending on your computer. You can change the menu display order to suit your taste by clicking [Settings] at the lower-right corner of the screen.
- For details on the use of the application software, click  at the upper-right corner of each screen to show the on-line help.

Technical support of “Picture Package” is provided by the Pixela User Support Center. For more information, refer to the enclosed information with the CD-ROM.

Viewing images on a computer

Click [Viewing video and pictures on PC] on the left side of the screen, then click [Viewing video and pictures on PC] in the lower-right corner of the screen.



The screen used for viewing images appears.

Storing images on a CD-R

Click [Save the images on CD-R] on the left side of the screen, then click [Save the images on CD-R] in the lower-right corner of the screen.



The screen used for storing images on a CD-R appears.

- A CD-R drive is required to store images on a CD-R. For further information on compatible drives, see the following home page of the Pixela User Support Center.
<http://www.ppackage.com/>

Creating a video CD with a menu ("ImageMixer VCD2")

"ImageMixer VCD2" is compatible with High resolution still image video CD.

- 1 Click [Burning Video CD] on the left side of the screen, then click [Burning Video CD] in the lower-right corner of the screen.



The "ImageMixer VCD2" screen appears.

- 2 Click [Video CD].
- 3 Select the folder in which the desired images are stored.
 - ① Select the desired folder on the left frame, then click [Add]. The selected folder moves to the right frame.
 - ② Click [Next].

- 4 Set up the menu background, buttons, titles, and so on, then click [Next].**

Confirm the set up according to your preferences.

- 5 Confirm the preview of the Video CD file.**

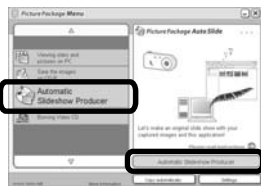
- ① Click the file you want to preview on the left frame.
- ② Click [▶] to preview the file.

- 6 Click [Next] and enter the disk name.**

When you insert a CD-R in the CD-R drive and click [Write], the screen used for writing to a disc appears.


Creating a slide show

Click [Automatic Slideshow Producer] on the left side of the screen, then click [Automatic Slideshow Producer] in the lower-right corner of the screen.



The screen used for creating a slide show appears.

Printing images

- 1 Perform the procedures described under “Viewing images on a computer” (page 100) to display the list of images.**
- 2 Double-click and select the images you want to print from the list.**
- 3 Click the  button on the screen.**



The screen used for printing images appears.

- 4** Click [File] in the upper-left corner of the screen, then select [Print].



The printing wizard screen appears.

- 5** Set the paper size and the number of sheets and print images.

Copying images to your computer

— For Macintosh users

Recommended computer environment

OS: Mac OS 9.1, 9.2, or Mac OS X (v10.0/v10.1/v10.2/v10.3)

The above OS must be installed at the factory.

USB connector: Provided as standard

- If you connect two or more USB equipment to a single computer at the same time, some equipment, including your camera, may not operate depending on the type of USB equipment.
- Operations are not guaranteed when using a USB hub.
- Operations are not guaranteed for all the recommended computer environments mentioned above.

USB mode

There are two modes for a USB connection when connecting with a computer, [Normal] and [PTP]* modes. The default setting is the [Normal] mode. This section describes the [Normal] mode as an example.

* For a details on the PTP connection, see page 126.

Communication with your computer

When your computer resumes from the suspend or sleep mode, communication between your camera and your computer may not recover at the same time.

When a USB connector is not provided on your computer

When neither a USB connector nor a “Memory Stick” slot is provided, you can copy images using an additional device. See the Sony Website for details.
<http://www.sony.net/>

1 Connecting your camera to your computer

For details, see page 91.

Disconnecting the USB cable, removing the “Memory Stick Duo” from your camera or turning off the power during USB connection

Drag and drop the drive icon or the icon of the “Memory Stick” to the “Trash” icon, then disconnect the USB cable, remove the “Memory Stick Duo”, or turn off the camera.

- If you are using Mac OS X v10.0, disconnect the USB cable etc., after you have turned your computer off.

2 Copying images

- 1 Double-click the newly recognized icon on the desktop.
The contents of the “Memory Stick Duo” inserted in your camera appear.
 - 2 Double-click [DCIM].
 - 3 Double-click the folder that the images you want to copy are stored.
 - 4 Drag and drop the image files to the hard disk icon.
- The image files are copied to your hard disk.
For details on the storage location of the images and file names, see page 95.

3 Viewing the images on your computer

- 1 Double-click the hard disk icon.
 - 2 Double-click the desired image file in the folder containing the copied files.
The image file opens.
- “Picture Package” cannot be used with Macintosh.

Using “ImageMixer VCD2”

“ImageMixer VCD2” is also compatible with Macintosh (Mac OS X (v10.1.5) or later). Using “ImageMixer VCD2” on the CD-ROM supplied with your camera, you can create a video CD using the image or movie materials that are stored in your computer.

- “ImageMixer VCD2” for Macintosh can create only the disk image to store the image file on a CD-R in the video CD format. Toast by Roxio (not supplied) is required to create a video CD.
- When the computer is in use, shut down all other application software before you install “ImageMixer VCD2.”

Technical support of “ImageMixer VCD2” is provided by the Pixela User Support Center. For more information, refer to the enclosed information with the CD-ROM.

Required computer environment

OS: Mac OS X (v10.1.5 or later)

The above OS must be installed at the factory.

CPU: iMac, eMac, iBook, PowerBook, Power Mac G3/G4 series

Memory: 128 MB or more (256 MB or more is recommended.)

Hard Disk: Disk space required for installation: approximately 250 MB

Display: 1024 × 768 dots or more, 32,000 colors or more

- QuickTime 4 or later must be pre-installed. (QuickTime 5 is recommended.)
- Operations are not guaranteed for all the recommended computer environments mentioned above.

1 Installing “ImageMixer VCD2”

- 1 Turn on your computer.
 - The display settings should be 1024 × 768 dots or higher and 32,000 colors or higher.
- 2 Insert the CD-ROM (supplied) into the CD-ROM drive.
- 3 Double-click the CD-ROM icon.
- 4 Copy the [IMXINST.SIT] file in the [MAC] folder to the hard disk icon.
- 5 Double-click the [IMXINST.SIT] file in the copy-to folder.
- 6 Double-click the [ImageMixer VCD2_Install] extracted file.
- 7 After the user information screen appears, enter the desired name and password.
The installation of the software starts.

2 Creating a video CD with a menu

“ImageMixer VCD2” is compatible with High resolution still image video CD.

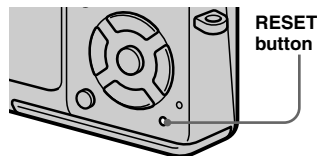
- 1 Open the [ImageMixer] folder in [Application].
- 2 Click [ImageMixer VCD2].
- 3 Carry out steps **2** to **5** on page 100.
- 4 Click [Next] and enter the disk name and its destination.
The preparation for storing the file on a CD-R is completed.

Troubleshooting

If you experience trouble with your camera, try the following solutions.

- 1 First check the items on the tables below. **If code displays “C:□□:□□” appear on the screen, the self-diagnosis display function is working (page 118).**

- 2 Should your camera still not work properly, press the RESET button on the lower right side of the control button using a fine-tipped object, then turn on the power again. (All the settings including date and time are cleared and reset to the factory settings.)


















- 3 Should your camera still not work properly, consult your Sony dealer or local authorized Sony service facility.
















Battery pack and power






Symptom	Cause/Solution
You cannot charge the battery pack.	<ul style="list-style-type: none">• The camera is turned on. Turn the camera off (page 20).
The battery pack cannot be installed.	<ul style="list-style-type: none">• Push the battery drop prevention lever, then open it (page 14).• Install the battery pack correctly (page 14).
The $\frac{1}{2}$ CHG lamp flashes when charging a battery pack.	<ul style="list-style-type: none">• Install the battery pack correctly (page 14).• The battery pack has malfunctioned. Consult your Sony dealer or local authorized Sony service facility.• The battery pack is discharged. Re-insert the AC Adaptor and then charge the battery pack.

Symptom	Cause/Solution
The 4/CHG lamp does not light up when charging a battery pack.	<ul style="list-style-type: none"> • The AC Adaptor is disconnected. Properly connect the AC Adaptor (page 19). • The AC Adaptor has malfunctioned. Consult your Sony dealer or local authorized Sony service facility. • Install the battery pack correctly (page 14). • The battery pack is completely charged. • The battery pack is discharged. Re-insert the AC Adaptor and then charge the battery pack. • Properly install the camera to the Cyber-shot Station (page 12).
The battery remaining indicator is incorrect, or sufficient battery remaining indicator is displayed but the power runs out soon.	<ul style="list-style-type: none"> • You have used the camera in an extremely hot or an extremely cold location (page 127). • A deviation has occurred in the remaining battery time. Fully discharge and then charge the battery pack so that the battery remaining indicator functions correctly (page 17). • The battery pack is discharged. Install a charged battery pack (page 14). • The battery pack is dead (page 131). Replace the battery pack with a new one.
The battery pack runs down too quickly.	<ul style="list-style-type: none"> • The battery pack is dead (page 131). Replace the battery pack with a new one. • You have used the camera in an extremely cold location (page 127). • The battery terminal is dirty. Clean the battery terminal with a cotton swab, etc., and charge the battery pack. • After charging the battery pack, disconnect the DC plug from your camera.
You cannot turn on the camera.	<ul style="list-style-type: none"> • Install the battery pack correctly (page 14). • The AC Adaptor is disconnected. Properly connect the AC Adaptor (page 19). • The AC Adaptor has malfunctioned. Consult your Sony dealer or local authorized Sony service facility. • The battery pack is discharged. Install a charged battery pack (page 14). • The battery pack is dead (page 131). Replace the battery pack with a new one. • Properly install the camera to the Cyber-shot Station (page 12).
The power turns off suddenly.	<ul style="list-style-type: none"> • If you do not operate the camera for about three minutes while the power is on, the camera turns off automatically to prevent wearing down the battery pack. Turn on the camera again (page 20) or use the AC Adaptor (page 19). • The battery pack is discharged. Install a charged battery pack (page 14). • Properly install the camera to the Cyber-shot Station (page 12).




Shooting still images/movies

Symptom	Cause/Solution
The LCD screen is not turned on even when the power is turned on.	<ul style="list-style-type: none"> The LCD backlight is turned off with  in the dark place. Turn on the LCD backlight with  (page 32).
The subject is not visible on the LCD screen.	<ul style="list-style-type: none"> Set the mode switch to  or  (page 31, 84).
The LCD screen turns blue and the subject does not appear when recording movies.	<ul style="list-style-type: none"> The image size is set to [640(Fine)] while an A/V connecting cable is connected to the A/V OUT (MONO) jack. Disconnect the A/V connecting cable or set the image size to other than [640(Fine)].
The image is out of focus.	<ul style="list-style-type: none"> The subject is too close. Set the camera to the close-ups (Macro) recording mode, and position the camera further away from the minimum shooting distance (approx. 8 cm (3 1/4 inches) at W side/25 cm (9 7/8 inches) at T side), then shoot the image (page 35). Or, select  (Magnifying glass mode) and focus from a distance of approx. 1 cm to 20 cm (13/32 inch to 7 7/8 inches) from the subject. When shooting still images, select the other mode than  (Magnifying glass mode),  (Twilight mode),  (Landscape mode) or  (Fireworks mode) for the Scene Selection function (page 43). The focus preset function is selected. Set to the auto focus mode (page 59).
Optical zoom does not work.	<ul style="list-style-type: none"> You cannot change the zoom scale when shooting movies. When shooting still images, select the other mode than  (Magnifying glass mode) for the Scene Selection function (page 43).
Precision digital zoom does not function.	<ul style="list-style-type: none"> [Digital Zoom] is set to [Smart] or [Off] on the Setup screen. Set [Digital Zoom] to [Precision] (pages 33 and 124). The mode switch is set to . Set the mode switch to .
Smart zoom does not function.	<ul style="list-style-type: none"> [Digital Zoom] is set to [Precision] or [Off] on the Setup screen. Set [Digital Zoom] to [Smart] (pages 33 and 124). The image size is set to [5M] or [3:2]. Set image size to other settings except [5M] and [3:2] (page 25). The smart zoom cannot be used in Multi Burst mode (pages 33 and 67). The mode switch is set to . Set the mode switch to .
The image is too dark.	<ul style="list-style-type: none"> You are shooting a subject with a light source behind the subject. Select the metering mode (page 62) or adjust the exposure (pages 60 and 120). The brightness of the LCD screen is too low. Adjust the brightness of the LCD backlight (page 125). Turn on the LCD backlight with  (page 32).

Symptom	Cause/Solution
The image is too bright.	<ul style="list-style-type: none"> You are shooting a spotlighted subject in a dark location such as on a stage. Adjust the exposure (pages 60 and 120). The brightness of the LCD screen is too bright. Adjust the brightness of the LCD backlight (page 125).
The image is monochrome (black and white).	<ul style="list-style-type: none"> Set [PFX] (P.Effect) to the other modes than [B&W] (page 68).
Vertical streaks appear when you are shooting a very bright subject.	<ul style="list-style-type: none"> The smear phenomenon is occurring. This phenomenon is not a malfunction.
Noise appears in the image when you view the LCD screen in a dark place.	<ul style="list-style-type: none"> The camera is functioning to increase the visibility of the LCD screen by temporarily brightening the image under conditions of low illumination. There is no effect on the recorded image.
Your camera cannot record images.	<ul style="list-style-type: none"> No "Memory Stick Duo" has been inserted. Insert a "Memory Stick Duo" (page 24). The capacity of the "Memory Stick Duo" is full. Delete unnecessary images saved in the "Memory Stick Duo" (pages 49 and 86) or change the "Memory Stick Duo". You are using the "Memory Stick Duo" with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position (page 129). You cannot record images while charging the flash. Set the mode switch to  when shooting still images (page 31). Set the mode switch to  when shooting movies (page 84). The image size is set to [640(Fine)] when recording movies. Insert a "Memory Stick PRO Duo" (pages 84 and 128) or set the image size to other than [640(Fine)].
Recording takes a long time.	<ul style="list-style-type: none"> NR slow shutter function is activated (page 43).
The flash does not work.	<ul style="list-style-type: none"> Set the mode switch to  (page 31). The flash is set to  (No flash). Set the flash to auto (No indicator),  (Forced flash) or  (Slow synchro) (page 37). When shooting still images, select the other mode than  (Twilight mode),  (Fireworks mode) or  (Candle mode) for the Scene Selection function (page 43). When  (Magnifying glass mode),  (Landscape mode),  (Snow mode),  (Beach mode) or  (High-speed shutter mode) is selected for the Scene Selection function, set the flash to  (Forced flash) (page 37). Set [Mode] (REC Mode) to [Normal].
Fuzzy specks appear in images shot using the flash.	<ul style="list-style-type: none"> Dust in the air reflected the flash light and appeared in the image. This is not a malfunction.


Symptom	Cause/Solution
The close-ups (Macro) function does not work.	<ul style="list-style-type: none"> When shooting still images, select the other mode than  (Magnifying glass mode),  (Twilight mode),  (Landscape mode),  (Fireworks mode) or  (Candle mode) for the Scene Selection function (page 43).
You cannot shoot continuously.	<ul style="list-style-type: none"> The capacity of the “Memory Stick Duo” is full. Delete unnecessary images saved in the “Memory Stick Duo” (pages 49 and 86) or change the “Memory Stick Duo”. The battery pack is discharged, so you can shoot only one image. Install a charged battery pack (page 14).
The eyes of the subject come out red.	<ul style="list-style-type: none"> Set [Red Eye Reduction] on the Setup screen to [On] (pages 37 and 124). Approach the subject and shoot from within the recommended shooting distance using the flash (page 37). Increase the indoor brightness and shoot the image.
The date and time are recorded incorrectly.	<ul style="list-style-type: none"> Set the correct date and time (pages 21 and 126).
The F value and shutter speed flash when you press and hold the shutter button halfway down.	<ul style="list-style-type: none"> Adjust the correct exposure (page 60).

Viewing images

Symptom	Cause/Solution
Your camera cannot play back images.	<ul style="list-style-type: none"> Set the mode switch to  (page 44). The folder/file name has been changed on your computer (page 97). Playback of image files that have been modified by a computer or images shot using other cameras on your camera is not guaranteed. The camera is in USB mode. Cancel USB communication (pages 92 and 103).
The image appears rough right after playback starts.	<ul style="list-style-type: none"> The image may appear rough right after playback starts due to the image processing. This condition is not a malfunction.
The image does not appear on the TV screen.	<ul style="list-style-type: none"> The video output signal setting of your camera on the Setup screen is incorrect. Change the setting (pages 54 and 126). The connection is not correct. Check the connection (page 46). The USB jack is connected (page 46). Follow the procedure of the note  on page 92 (Windows) or  on page 103 (Macintosh) and disconnect the USB cable.

Symptom	Cause/Solution
The image cannot be played back on a computer.	<ul style="list-style-type: none"> See page 111.

Deleting/Editing Images

Symptom	Cause/Solution
Your camera cannot delete an image.	<ul style="list-style-type: none"> The image is protected. Cancel the protection (page 74). You are using the “Memory Stick Duo” with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position (page 129).
You have deleted an image by mistake.	<ul style="list-style-type: none"> Marking  (protect) will prevent you from deleting images by mistake (page 74). If you are using the “Memory Stick Duo” with write-protect switch, we recommend that you set the switch to the LOCK position to prevent accidental erasure (page 129).
The resizing function does not work.	<ul style="list-style-type: none"> You cannot resize movies and Multi Burst images.
You cannot display a print (DPOF) mark.	<ul style="list-style-type: none"> You cannot display print (DPOF) marks on movies.
You cannot cut a movie.	<ul style="list-style-type: none"> The movie is not long enough to cut. Protected movie cannot be cut. Cancel the protection (page 74). Still images cannot be cut.

Computers


Symptom	Cause/Solution
You do not know if the OS of your computer is compatible.	<ul style="list-style-type: none"> Check “Recommended computer environment” (pages 89 and 102).
You cannot install the USB driver.	<ul style="list-style-type: none"> In Windows 2000, log on as Administrator (authorized Administrators) (page 89).
Your computer does not recognize your camera.	<ul style="list-style-type: none"> Turn on the camera (page 20). The battery level is low. Use the AC Adaptor (page 19). Use the supplied USB cable (pages 91 and 102). Disconnect the USB cable from both the computer and the Cyber-shot Station, and connect it again firmly. Make sure that “USB Mode” is displayed on the LCD screen (page 91). Properly install the camera to the Cyber-shot Station (page 12). Set [USB Connect] to [Normal] on the Setup screen (pages 54 and 126). The USB connectors on your computer are connected to other equipment besides the keyboard, the mouse and the Cyber-shot Station. Disconnect all equipment other than the keyboard and the mouse from the USB connectors (page 89). The camera is not connected directly to your computer. Connect the camera directly to your computer without passing through a USB hub or other device (page 89). Install the USB driver (page 90). Your computer does not properly recognize the device because you connected the camera and your computer with the USB cable before you installed the “USB Driver” from the supplied CD-ROM. Delete the erroneously recognized device from your computer (page 93), then install the USB driver (page 90).
You cannot copy images.	<ul style="list-style-type: none"> Make a correct USB connection between the camera and your computer (pages 91 and 103). Follow the designated copy procedure for your OS (pages 92, 93, 99 and 102). You attempted to shoot using a “Memory Stick Duo” formatted by a computer. Shoot using a “Memory Stick Duo” formatted by your camera.
After making a USB connection, “Picture Package” does not automatically start.	<ul style="list-style-type: none"> Start up the “Picture Package Menu” and check [Settings]. Make a USB connection when the computer is turned on (page 91).
The image cannot be played back on a computer.	<ul style="list-style-type: none"> If you are using the “Picture Package” application software, click on help at the upper-right corner of each screen. Consult the computer or software manufacturer.

Symptom	Cause/Solution
The image and sound are interrupted by noise when you view a movie on a computer.	<ul style="list-style-type: none"> You are playing back the movie directly from the “Memory Stick Duo”. Copy the movie to the hard disk of your computer and then play back the movie from the hard disk (pages 92, 93, 99 and 102).
You cannot print an image.	<ul style="list-style-type: none"> Check the printer settings.
Images once copied to a computer cannot be viewed on the camera.	<ul style="list-style-type: none"> Copied to a wrong folder. Copy them to an available folders, such as “101MSDCF” (page 97). The folder/file name has been changed on your computer (page 97).


“Memory Stick Duo”

Symptom	Cause/Solution
You cannot insert a “Memory Stick Duo”.	<ul style="list-style-type: none"> You are inserting the “Memory Stick Duo” backwards. Insert the “Memory Stick Duo” from the correct side (page 24).
You cannot record on a “Memory Stick Duo”.	<ul style="list-style-type: none"> You are using the “Memory Stick Duo” with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position (page 129). The capacity of the “Memory Stick Duo” is full. Delete unnecessary images (pages 49 and 86). The image size is set to [640(Fine)] when recording movies. Insert a “Memory Stick PRO Duo” (pages 84 and 129) or set the image size to other than [640(Fine)].
You cannot format a “Memory Stick Duo”.	<ul style="list-style-type: none"> You are using the “Memory Stick Duo” with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position (page 129).
You have formatted a “Memory Stick Duo” by mistake.	<ul style="list-style-type: none"> All the data on the “Memory Stick Duo” are deleted by formatting. You cannot restore them. If you are using the “Memory Stick Duo” with write-protect switch, we recommend that you set the switch to the LOCK position to prevent accidental erasure (page 129).

PictBridge compliant printer

Symptom	Cause/Solution
The connection cannot be established.	<ul style="list-style-type: none"> Consult with the printer manufacturer whether the printer is compliant with the PictBridge or not. Check that the printer is turned on and can connect with the camera. Set [USB Connect] to [PictBridge] on the Setup screen (page 126). Depending on the circumstances, the connection may not be established. Disconnect and connect the USB cable again. If an error message is indicated on the printer, refer to the operating instructions supplied with the printer.
You cannot print images.	<ul style="list-style-type: none"> The camera is not connected to the printer. Check that the camera and the printer are properly connected using the USB cable. Turn on the printer. For further information, refer to the operating instructions supplied with it. If you select [Exit] during printing, you may not print again depending on your printer. Disconnect and connect the USB cable again. If you cannot print still, disconnect the USB cable, turn off and on the printer, then connect the USB cable again. Movies cannot be printed. Images modified with a computer or images shot using other than this camera may not be able to be printed.
Printing is canceled.	<ul style="list-style-type: none"> You disconnected the USB cable before the  (Not disconnect USB cable) mark disappears.
You cannot insert the date or print images in the index mode.	<ul style="list-style-type: none"> Consult with the printer manufacturer whether the printer provides date function or index print function or not. The date may not be inserted in the index mode depending on the printer. Consult with the printer manufacturer.
The paper size you want to print on does not appear.	<ul style="list-style-type: none"> Check with the printer manufacturer whether the printer supports the paper size you want to print on.
“---- --” is printed on the date-inserted part.	<ul style="list-style-type: none"> The images that do not have the recording date data cannot be printed with the date inserted. Set [Date] to [Off] and print the image.
You cannot print with the current paper size setting of the printer.	<ul style="list-style-type: none"> If the printer paper was changed to paper of a different size after the camera was connected to the printer, disconnect and connect the USB cable again. The printing setting of the camera differs from the printer setting. Change the paper size setting of the camera (pages 79 and 81) or change the printer setting.
You cannot perform other operations when printing is stopped.	<ul style="list-style-type: none"> The printer is performing the printing stop processing, so wait for this processing to finish. (This processing may take some time depending on the printer.)






Others

Symptom	Cause/Solution
A slight rattling noise is heard from inside your camera when you move the camera.	<ul style="list-style-type: none"> Linear mechanisms are used for some of the lens functions of your camera. This is not a malfunction.
Your camera does not work.	<ul style="list-style-type: none"> You are not using an “InfoLITHIUM” battery pack. Use an “InfoLITHIUM” battery pack (page 130). The battery level is low. (The  indicator appears.) Charge the battery pack (page 14). Connect the AC Adaptor securely to the multi connector of your camera and to a wall outlet (wall socket) (page 19). Properly install the camera to the Cyber-shot Station (page 12).
The power is on, but the camera does not work.	<ul style="list-style-type: none"> The built-in microcomputer is not working properly. Disconnect, and then, after one minute, reconnect all power sources and turn on the camera. If this does not work, press the RESET button on the lower right side of the control button with a fine-tipped object, then turn the power on again. (This will clear the date and time settings, etc.) (page 105)
You cannot identify an indicator on the screen.	<ul style="list-style-type: none"> Check the indicator (pages 133 to 137).
The lens gets fogged.	<ul style="list-style-type: none"> Moisture condensation has occurred. Turn off the camera and leave for about an hour at room temperature for the moisture to evaporate before use (page 128).
The camera becomes warm when you use it for the long time.	<ul style="list-style-type: none"> This is not a malfunction.

Warnings and messages

The following messages may appear on the screen.

Message	Meaning/Corrective Action
No Memory Stick	<ul style="list-style-type: none">• Insert a “Memory Stick Duo” (page 24).
System error	<ul style="list-style-type: none">• Turn the power off and on again (page 20).
Memory Stick error	<ul style="list-style-type: none">• The inserted “Memory Stick Duo” cannot be used in your camera (page 128).• The “Memory Stick Duo” is damaged.• The terminal section of the “Memory Stick Duo” is dirty.• Insert the “Memory Stick Duo” correctly (page 24).
Memory Stick type error	<ul style="list-style-type: none">• The inserted “Memory Stick Duo” cannot be used in your camera (page 128).
Format error	<ul style="list-style-type: none">• Failed to format the “Memory Stick Duo”. Format the “Memory Stick Duo” again (page 51).
Memory Stick locked	<ul style="list-style-type: none">• You are using the “Memory Stick Duo” with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position (page 129).
No memory space	<ul style="list-style-type: none">• The capacity of the “Memory Stick Duo” is insufficient. You cannot record images. Delete unnecessary images (pages 49 and 86).
Read only memory	<ul style="list-style-type: none">• Your camera cannot record or delete images to this “Memory Stick Duo”.
No file in this folder	<ul style="list-style-type: none">• No images have been recorded in this folder.
Folder error	<ul style="list-style-type: none">• A folder with the same first three digits number already exists in the “Memory Stick Duo”. (For example: 123MSDCF and 123ABCDE) Select other folders, or create a new folder.
Cannot create more folders	<ul style="list-style-type: none">• The folder whose first three digits of the name is “999” exists in the “Memory Stick Duo”. You cannot create any folders.
Cannot record	<ul style="list-style-type: none">• The camera cannot record images in the selected folder. Select a different folder (page 56).
File error	<ul style="list-style-type: none">• An error occurred while playing back the image.
File protect	<ul style="list-style-type: none">• The image is protected against erasure. Release the protection (page 74).
For “InfoLITHIUM” battery only	<ul style="list-style-type: none">• The battery pack is not the “InfoLITHIUM” type.

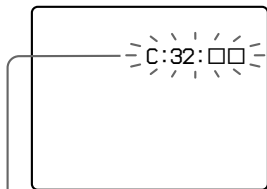
Message	Meaning/Corrective Action
Image size over	<ul style="list-style-type: none"> You are playing back an image of a size that cannot be played back on your camera.
Cannot divide	<ul style="list-style-type: none"> The movie is not long enough to be divided (about more than two seconds). The file is not a movie.
Invalid operation	<ul style="list-style-type: none"> You are playing back a file that was created on equipment other than this camera.
	<ul style="list-style-type: none"> The battery level is low or zero. Charge the battery pack (page 14). Depending on the conditions of use or the type of battery pack, the indicator may flash even though there are still 5 to 10 minutes of remaining battery time left.
	<ul style="list-style-type: none"> Camera shake may occur due to insufficient light. Use the flash, mount the camera on a tripod, or otherwise secure the camera in place.
Turn the power off and on again	<ul style="list-style-type: none"> A problem with the lens caused an error.
640(Fine) is not available	<ul style="list-style-type: none"> 640(Fine) size movies can be recorded only using "Memory Stick PRO Duo." Insert a "Memory Stick PRO Duo" or set the image size to other than [640(Fine)].
Enable printer to connect	<ul style="list-style-type: none"> [USB Connect] is set to [PictBridge], however the camera is connected to a non-PictBridge compliant device. Check the device. Depending on the circumstances, the connection may not be established. Disconnect and connect the USB cable again. If an error message is indicated on the printer, refer to the operating instructions supplied with the printer.
Connect to  device	<ul style="list-style-type: none"> You tried to print images before the printer connection was established. Connect to a PictBridge compliant printer.
No printable image	<ul style="list-style-type: none"> You tried to execute [DPOF image] without checking the  mark. You tried to execute [All In This Folder] while selecting the folder that stores only movies. You cannot print movies.
Printer busy	<ul style="list-style-type: none"> Since the printer is busy, it cannot receive print requests. Check the printer.
Paper error	<ul style="list-style-type: none"> A paper error occurred, such as paper-out, paper-jam, etc. Check the printer.
Ink error	<ul style="list-style-type: none"> An ink error has occurred in the connected printer. Or the ink level is low or runs out. Check the printer.
Printer error	<ul style="list-style-type: none"> The camera received an error from the printer. Check the printer, or check if the image you want to print is corrupted.
	<ul style="list-style-type: none"> The data transmission to the printer may not be completed yet. Do not disconnect the USB cable.

Message	Meaning/Corrective Action
Processing	<ul style="list-style-type: none"> • The printer is performing the printing stop processing. Printing is not possible until this processing is completed. This processing may take some time depending on the printer.

Self-diagnosis display

– If a code starting with an alphabet letter appears

Your camera has a self-diagnosis display. This function displays the camera condition on the LCD screen with a combination of a letter and four numerical digits. If this occurs, check the following code chart and attempt the corresponding corrective actions. The last two digits (indicated by □□) will differ depending on the state of the camera.



Self-diagnosis display

Code	Cause	Countermeasure
C:32: □□	There is trouble with your camera's hardware.	• Turn the power off and on again (page 20).
C:13: □□	The camera cannot read or write data on the "Memory Stick Duo".	• Re-insert the "Memory Stick Duo" several times.
	An unformatted "Memory Stick Duo" is inserted.	• Format the "Memory Stick Duo" (page 51).
	The inserted "Memory Stick Duo" cannot be used with your camera, or the data is damaged.	• Insert a new "Memory Stick Duo" (page 24).
E:61: □□ E:91: □□	A camera malfunction that you cannot reverse has occurred.	• Press the RESET button located on the lower right side of the control button, then turn the power on again. (page 105)

If you are unable to solve the problem even after trying the corrective actions a few times, contact your Sony dealer or local authorized Sony service facility.

Number of images that can be saved or shooting time

The number of images that can be saved and the shooting time differ, depending on the capacity of the “Memory Stick Duo”, the image size, and the image quality. Refer to the following charts when you choose a “Memory Stick Duo”.

- The number of images is listed in Fine (Standard) order.
- The values for the number of images that can be saved and the shooting time may vary, depending on the shooting conditions.
- For normal shooting times and numbers of images that can be saved, see page 28.
- When the number of remaining shooting images is greater than 9,999, the “>9999” indicator appears on the LCD screen.
- The table below shows the approximate number of images and recording time that can be recorded on a “Memory Stick Duo” that has been formatted by this camera.

Multi Burst

(Units: images)

	16MB	32MB	64MB	128MB	256MB	512MB
1M	24 (46)	50 (93)	101 (187)	202 (376)	357 (649)	726 (1320)

Movie

	16MB	32MB	64MB	128MB	256MB	512MB
640(Fine)	—	—	—	—	0:02:57	0:06:02
640(Standard)	0:00:42	0:01:27	0:02:56	0:05:54	0:10:42	0:21:47
160	0:11:12	0:22:42	0:45:39	1:31:33	2:51:21	5:47:05

The numbers indicate the recording time. For example: “1:34:45” indicates “1 hour, 34 minutes, 45 seconds.”

- The image size is as follows:
640(Fine): 640×480
640(Standard): 640×480
160: 160×112


































Menu items








Menu items that can be modified differ depending on the position of the mode switch or the setting.


Menu items are maintained even when the power is turned off or the mode switch is changed to other position (except [PFX] (P.Effect)).


Factory settings are indicated with ■.







When the mode switch is set to





Item	Setting	Description
 (Camera)	 /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  /  / /	


Item	Setting	Description
Mode (REC Mode)⁵⁾	Multi Burst Exp Brktg Speed Burst Burst ■Normal	<ul style="list-style-type: none"> Records a continuous burst of 16 frames within a single still image (page 67). Records three images with the exposure value of each image slightly shifted (page 63). Records continuously with a short shooting interval (page 66). Continuously shoots even more images (page 66). Records an image using the normal recording mode.
BRK (Bracket Step)³⁾	±1.0EV / ■±0.7EV / ±0.3EV	Sets the exposure compensation value when recording three images with each exposure adjustment value (page 63). (This setting cannot be made when [Mode] (REC Mode) in the menu is set to other than [Exp Brktg].)
 (Interval)³⁾	1/7.5 / 1/15 / ■1/30	Selects the Multi Burst shutter interval (page 67). (This setting cannot be made when [Mode] (REC Mode) in the menu is set to other than [Multi Burst].)
± (Flash Level)⁴⁾	+ / ■Normal / -	Selects the amount of flash light (page 66).
PFX (P.Effect)¹⁾	B&W / Sepia / ■Off	Sets the image special effects (page 68).
 (Saturation)²⁾	+ / ■Normal / -	Adjusts the saturation of the image. The  indicator appears (except when the setting is Normal).
 (Contrast)²⁾	+ / ■Normal / -	Adjusts the contrast of the image. The  indicator appears (except when the setting is Normal).
 (Sharpness)²⁾	+ / ■Normal / -	Adjusts the sharpness of the image. The  indicator appears (except when the setting is Normal).

¹⁾ This does not appear when  (Camera) in the menu is set to [Auto].













²⁾ This does not appear when  (Camera) in the menu is set to other than [Program].

³⁾ This does not appear when  (Camera) in the menu is set to [Auto],  (Magnifying glass mode),  (Twilight mode),  (Twilight portrait mode),  (Fireworks mode) or  (Candle mode).










⁴⁾ This does not appear when  (Camera) in the menu is set to [Auto],  (Twilight mode),  (Fireworks mode) or  (Candle mode).

⁵⁾ The available settings are limited according to the  (Camera) setting in the menu.


When the mode switch is set to

Item	Setting	Description
 (EV)	+2.0EV / +1.7EV / +1.3EV / +1.0EV / +0.7EV / +0.3EV /  0EV / -0.3EV / -0.7EV / -1.0EV / -1.3EV / -1.7EV / -2.0EV	Adjusts the exposure (page 60).
 (Focus)	∞ / 7.0m / 3.0m / 1.0m / 0.5m / Spot AF / Center AF /  Multi AF	Chooses the auto focus method (page 57), or sets the focus preset distance (page 59).
 (Metering Mode)	Spot /  Multi	Matches the exposure to the subject you want to shoot (page 62). Set the metering region.
WB (White Bal)	 /  /  /  /  Auto	Sets the white balance (page 65).
PFX (P.Effect)	B&W / Sepia /  Off	Sets the image special effects (page 68).

When the mode switch is set to

Item	Setting	Description
 (Folder)	OK / Cancel	Selects the folder containing the image you want to play back (page 69).
 (Protect)	—	Protects and unprotects images against accidental erasure (page 74).
DPOF (DPOF)	—	Marks and unmarks the print (DPOF) mark on still images you want to print (page 82).
 (Print)	—	Prints images using a PictBridge compliant printer (page 77).
 (Slide)	Interval Image Repeat Start Cancel	<ul style="list-style-type: none"> – Sets the slide show interval (page 71). (Only in single-image mode) <ul style="list-style-type: none"> ■ 3 sec / 5 sec / 10 sec / 30 sec / 1 min – Sets the range of the playback images. <ul style="list-style-type: none"> ■ Folder / All – Plays back images repeatedly. <ul style="list-style-type: none"> ■ On / Off – Starts the slide show. – Cancels the slide show.
 (Resize)	5M / 3M / 1M / VGA / Cancel	Changes the recorded still image size (page 75). (Only in single-image mode)
 (Rotate)	 (counter clockwise) /  (clockwise) / OK / Cancel	Rotates the still image (page 72). (Only in single-image mode)
 (Divide)	OK / Cancel	Divides a moving image (page 87). (Only in single-image mode)

Setup items




The Setup screen appears when you advance to  in the menu and press ► again.

Factory settings are indicated with ■.

(Camera 1)

Item	Setting	Description
AF Mode	■Single / Monitor	Selects the focus operation mode (page 58).
Digital Zoom	■Smart / Precision / Off	Selects the digital zoom mode (page 33).
Date/Time	Day&Time / Date / ■Off	Selects whether to superimpose the date or time onto the image (page 38). The date and time are not inserted in movie or Multi Burst mode. Also, the date and time appear only during playback, and do not appear during recording.
Red Eye Reduction	On / ■Off	Reduces the red-eye phenomenon when using a flash (page 37).
AF Illuminator	■Auto / Off	Selects whether to emit an AF assist light in the dark. Helps when it is hard to focus on the subject under dark lighting (page 38).
Auto Review	■On / Off	Selects whether to automatically display the recorded image on the LCD screen immediately after shooting a still image. When set to [On], the recorded image is displayed for approximately two seconds. If you press the shutter button halfway down during this period, the recorded image display disappears and you can immediately shoot the next image.


(Camera 2)

Item	Setting	Description
Enlarged Icon	■On / Off	Selects whether to temporarily enlarge the setting indication when you press  (Flash mode),  (Self-timer) or  (Macro).

(Memory Stick Tool)

Item	Setting	Description
Format	OK / Cancel	Formats the “Memory Stick Duo”. Note that formatting irrevocably erases all data on a “Memory Stick Duo”, including even protected images (page 51).
Create REC. Folder	OK / Cancel	Creates a folder for recording images (page 55).
Change REC. Folder	OK / Cancel	Changes a folder for recording images (page 56).

(Setup 1)

Item	Setting	Description
LCD Backlight	Bright / ■Normal	Selects the brightness of the LCD backlight. Selecting [Bright] makes the screen bright and easy to see when using the camera outdoors or in other bright locations, but also uses up the battery charge faster. Displayed only when you are using the camera with the battery pack.
Beep	Shutter ■On Off	<ul style="list-style-type: none">– Turns on the shutter sound when you press the shutter button.– Turns on the beep/shutter sound when you press the control button/press the shutter button.– Turns off the beep/shutter sound.
 Language	—	Displays the menu items, warnings and messages in selected language.

(Setup 2)

Item	Setting	Description
File Number	■Series	– Assigns numbers to files in sequence even if the “Memory Stick Duo” is changed or the recording folder is changed.
	Reset	– Resets the file numbering and starts from 0001 each time the folder is changed. (When the recording folder contains a file, a number one higher than the largest number is assigned.)
USB Connect	PictBridge PTP	– Connects the camera with a PictBridge compatible printer (page 78). – When a PTP connection is made, the Copy Wizard automatically starts up and copies the images in the recording folder (page 95) set in the camera to the computer. (This supports Windows XP and Mac OS X.)
	■Normal	– Makes a USB connection between the camera and a computer (pages 91 and 103).
Video Out	NTSC	– Sets the video output signal to NTSC mode (e.g., USA, Japan).
	PAL	– Sets the video output signal to PAL mode (e.g., Europe).
Clock Set	OK / Cancel	Sets the date and time (pages 21 and 54).

Precautions

Do not leave the camera in the following places

- In extremely hot place, such as in a car parked in the sun. The camera body may become deformed or this may cause a malfunction.
- Under direct sunlight or near a heater. The camera body may become discolored or deformed, or this may cause a malfunction.
- On rocking vibration
- Near strong magnetic place
- In sandy or dusty places, be careful not to let sand or dust get into the camera. This may cause the camera to malfunction, and in some cases this malfunction cannot be repaired.

On carrying

Do not sit down in a chair or other place with the camera in the back pocket of your trousers or skirt, as this may cause malfunction or damage the camera.

On cleaning

Cleaning the LCD screen

Wipe the screen surface with an LCD cleaning kit (not supplied) to remove fingerprints, dust, etc.

Cleaning the lens

Wipe the lens with a soft cloth to remove fingerprints, dust, etc.

Cleaning the DC plug

Clean the DC plug of the AC Adaptor with a dry cotton bud. Do not use the dirty plug. Use of the dirty plug may not properly charge the battery pack.

Cleaning the camera surface

Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface with a dry cloth. Do not use the following as this may damage the finish or the casing.

- Chemical products such as thinner, benzene, alcohol, disposable cloth, insect repellent or insecticide, etc.
- Touch the camera with the above on your hand
- Contact with rubber or vinyl for a long time

On operating temperature

Your camera is designed for use between the temperatures of 0°C and 40°C (32°F and 104°F). Shooting in extremely cold or hot places that exceed this range is not recommended.

On moisture condensation

If the camera is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense inside or outside the camera. This moisture condensation may cause a malfunction of the camera.

Moisture condensation occurs easily when:

- The camera is brought from a cold location such as a ski slope into a warmly heated room
- The camera is taken from an air-conditioned room or car interior to the hot outdoors, etc.

How to prevent moisture condensation

When bringing the camera from a cold place to a warm place, seal the camera in a plastic bag and allow it to adapt to conditions at the new location over a period of time (about an hour).

If moisture condensation occurs

Turn off the camera and wait about an hour for the moisture to evaporate. Note that if you attempt to shoot with moisture remaining inside the lens, you will be unable to record clear images.

On internal rechargeable button battery

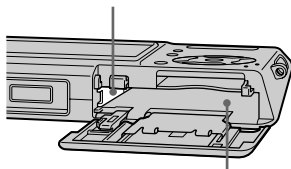
This camera has an internal rechargeable button battery for maintaining the date and time and other settings regardless of whether the power is on or off. This rechargeable button battery is continually charged as long as you are using the camera. However, if you use the camera for only short periods it discharges gradually, and if you do not use the camera at all for about one month it becomes completely discharged. In this case, be sure to charge this rechargeable button battery before using the camera. However, even if this rechargeable button battery is not charged, you can still use the camera as long as you do not record the date and time.

Charging method

Connect the camera to a wall outlet (wall socket) using the AC Adaptor, or install a charged battery pack, and leave the camera for 24 hours or more with the power off.

- The rechargeable button battery is located inside the cover in the left side of battery insertion slot of the camera. Never remove the rechargeable button battery.

Rechargeable button battery



Battery insertion slot

On “Memory Stick”

“Memory Stick” is a compact, portable IC recording medium.

The types of “Memory Stick” that can be used with this camera are listed in the following table. However, proper operation cannot be guaranteed for all “Memory Stick” functions.

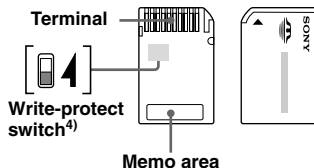
“Memory Stick” type	Recording/ Playback ³⁾
Memory Stick	—
Memory Stick (MagicGate/ high-speed data transfer)	—
Memory Stick Duo	○
Memory Stick Duo (MagicGate/high-speed data transfer)	○ ¹⁾²⁾
MagicGate Memory Stick	—
MagicGate Memory Stick Duo	○ ¹⁾
Memory Stick PRO	—
Memory Stick PRO Duo	○ ¹⁾²⁾

¹⁾ “MagicGate Memory Stick Duo” and “Memory Stick PRO Duo” are equipped with MagicGate functions. MagicGate is copyright protection technology that uses encryption technology. Data recording/playback that requires MagicGate functions cannot be performed with this camera.

- ²⁾ Supports high-speed data transfer using a parallel interface.
- ³⁾ 640(Fine) size movies can be recorded and played back only using “Memory Stick PRO Duo.”
- “Memory Stick Duo” formatted with a computer is not guaranteed to operate with this camera.
- Data read/write speeds differ depending on the combination of the “Memory Stick Duo” and the equipment used.

Notes on using “Memory Stick Duo” (supplied)

- You cannot record, edit or delete images if you slide the write-protect switch⁴⁾ to LOCK with a fine-tipped object.



The position or the shape of the write-protect switch⁴⁾ may differ depending on the “Memory Stick Duo” you use.

⁴⁾ The “Memory Stick Duo” supplied with this camera does not have a write-protect switch. When using the supplied “Memory Stick Duo,” be careful not to edit or delete data by mistake.

- Do not remove the “Memory Stick Duo” while reading or writing data.

- Data may be corrupted in the following cases:
 - When the “Memory Stick Duo” is removed or the camera is turned off during read or write operation
 - When the “Memory Stick Duo” is used in locations subject to static electricity or electrical noise
- We recommend backing up important data.
- Do not press down hard when you write down on the memo area.
- Do not attach a label on the “Memory Stick Duo” itself nor on a Memory Stick Duo Adaptor.
- When you carry or store the “Memory Stick Duo,” put it in the case supplied with it.
- Do not touch the terminal of the “Memory Stick Duo” with your hand or a metal object.
- Do not strike, bend or drop the “Memory Stick Duo.”
- Do not disassemble or modify the “Memory Stick Duo.”
- Do not expose the “Memory Stick Duo” to water.
- Do not leave the “Memory Stick Duo” within the reach of small children. They might accidentally swallow it.
- Do not use or keep the “Memory Stick Duo” under the following conditions:
 - High temperature locations such as the hot interior of a car parked in direct sunlight
 - Locations exposed to direct sunlight
 - Humid locations or locations with corrosive substances

Notes on using a Memory Stick Duo Adaptor (supplied)

- When using a “Memory Stick Duo” with a “Memory Stick” compliant device, be sure to insert the “Memory Stick Duo” into a Memory Stick Duo Adaptor.
- If you insert a “Memory Stick Duo” into a “Memory Stick” compliant device without a Memory Stick Duo Adaptor, you might not be able to remove it from the device.
- When inserting a “Memory Stick Duo” into a Memory Stick Duo Adaptor, make sure the “Memory Stick Duo” is inserted facing in the correct direction, then insert it all the way in. Incorrect insertion may result in a malfunction.
- When using a “Memory Stick Duo” inserted into a Memory Stick Duo Adaptor with a “Memory Stick” compliant device, make sure that the “Memory Stick Duo” is inserted facing the correct direction. Note that improper use may damage the equipment.
- Do not insert a Memory Stick Duo Adaptor into a “Memory Stick” compliant device without a “Memory Stick Duo” attached. Doing so may result in malfunction of the unit.

Note on using “Memory Stick PRO Duo” (not supplied)

“Memory Stick PRO Duo” with a capacity up to 512MB have been confirmed to operate properly with this camera.

On “InfoLITHIUM” battery pack



What is the “InfoLITHIUM” battery pack?

The “InfoLITHIUM” battery pack is a lithium-ion battery pack that has functions for communicating information related to operating conditions between your camera and the AC Adaptor.

The “InfoLITHIUM” battery pack calculates the power consumption according to the operating conditions of your camera, and displays the remaining battery time in minutes.

Charging the battery pack

We recommend charging the battery pack in an ambient temperature of between 10°C to 30°C (50°F to 86°F). You may not be able to efficiently charge the battery pack outside of this temperature range.

Effective use of the battery pack

- Battery performance decreases in low-temperature surroundings. So, the time that the battery pack can be used is shorter in cold places. We recommend the following to ensure longer battery pack use:
 - Put the battery pack in a pocket close to your body to warm it up, and insert it in your camera immediately before you start shooting.
- Frequently operating the zoom or flash wears out the battery charge faster.
- We recommend having spare battery packs handy for two or three times the expected shooting time, and making trial shots before taking the actual shots.
- Do not expose the battery pack to water. The battery pack is not water-resistant.
- Do not leave the camera in a hot location such as inside a hot car or exposed to direct sunlight.

Remaining battery time indicator

The power may go off although the battery remaining indicator shows there is enough power to operate. Use the battery pack up and charge the battery pack fully again so that the indication on the battery remaining indicator is correct. Note, however, that the correct battery indication sometimes will not be restored if the camera is used in high temperatures for a long time or left in a fully charged state, or the battery pack is frequently used.

How to store the battery pack

- Even if the battery pack will not be used for a long time, fully charge it and use it up once per year. Remove the battery pack from your camera, then store it in a dry, cool place. This is to maintain the battery pack's functions.
- To use the battery pack up on your camera, leave the POWER button to on in slide show playback mode (page 71) until the power goes off.
- Always carry and store the battery pack in the battery case to prevent the battery terminals from becoming dirty or short circuited.

Battery life

- The battery life is limited. Battery capacity decreases little by little as you use it more and more, and as time passes. When the battery operating time is shortened considerably, a probable cause is that the battery pack has reached the end of its life. Buy a new battery pack.
- The battery life varies according to how it is stored and the operating conditions and environment for each battery pack.

Specifications

■ Camera

[System]

Image device

7.66 mm (1/2.4 type) color CCD
Primary color filter

Total pixels number of camera

Approx. 5 255 000 pixels

Effective pixels number of camera

Approx. 5 090 000 pixels

Lens

Carl Zeiss Vario-Tessar
3× zoom lens
f = 6.7 – 20.1 mm (38 – 114 mm
when converted to a 35 mm still
camera)
F3.5 – 4.4

Exposure control

Automatic exposure, Scene selection
(9 modes)

White balance

Automatic, Daylight, Cloudy,
Fluorescent, Incandescent, Flash

File format (DCF compliant)

Still images: Exif Ver. 2.2 JPEG
compliant, DPOF compatible
Movies: MPEG1 compliant
(Monaural)

Recording media

“Memory Stick Duo”

Flash

Recommended distance (ISO set to
Auto):
0.1 m to 1.7 m (4 inches to 5 feet
6 7/8 inches) (W)
0.5 m to 1.6 m (1 foot 7 3/4 inches to
5 feet 2 7/8 inches) (T)

[Input and Output connectors]

Multi connector

USB communication

Hi-Speed USB (USB 2.0 compliant)

[LCD screen]

LCD panel

6.2 cm (2.5 type) TFT drive

Total number of dots

230 400 (960×240) dots

[Power, general]

Used battery pack

NP-FT1

Power requirements

3.6 V

Power consumption (during shooting)

1.4 W

Operating temperature

0°C to +40°C (+32°F to +104°F)

Storage temperature

–20°C to +60°C (–4°F to +140°F)

Dimensions

Approx. 91×60×17.8 mm
(3 5/8×2 3/8×23/32 inches) (W/H/D,
excluding maximum protrusions)

Mass

Approx. 171 g (6.0 oz) (including
battery pack NP-FT1, “Memory
Stick Duo” and wrist strap)

Microphone

Electret condenser microphone

Speaker

Dynamic speaker

Exif Print

Compatible

PRINT Image Matching II

Compatible

PictBridge

Compatible

■ UC-TC Cyber-shot Station

[Input and Output connectors]

A/V OUT (MONO) jack (Monaural)

Minijack

Video: 1 Vp-p, 75 Ω , unbalanced,
sync negative

Audio: 327 mV (at a 47 k Ω load)
Output impedance 1 k Ω

USB jack B

USB connection

High-Speed USB
(USB 2.0 High-Speed compatible)

DC IN jack

Camera connector

■ AC-LM5/LM5A AC Adaptor

Input rating

100 V to 240 V AC,
50/60 Hz, 0.16 A to 0.09 A

AC-LM5

10 W

AC-LM5A

11 W

Output rating

4.2 V DC, 1.5 A

Operating temperature

0°C to +40°C (+32°F to +104°F)

Storage temperature

-20°C to +60°C (-4°F to +140°F)

Dimensions

AC-LM5

Approx. 47×30×80 mm
(1 7/8×1 3/16×3 1/4 inches)

AC-LM5A

Approx. 48×29×81 mm
(1 15/16×1 3/16×3 1/4 inches)
(W/H/D, excluding projecting parts)

Mass

AC-LM5

Approx. 170 g (6.0 oz)

AC-LM5A

Approx. 160 g (5.6 oz)
excluding power cord (mains lead)

■ NP-FT1 battery pack

Used battery

Lithium-ion battery

Maximum voltage

DC 4.2 V

Nominal voltage

DC 3.6 V

Capacity 2.4 Wh (680 mAh)

■ Accessories

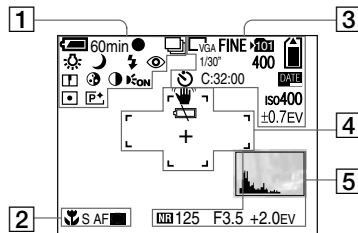
- AC-LM5/LM5A AC Adaptor (1)
- Power cord (mains lead) (1)
- NP-FT1 battery pack (1)
- Cyber-shot Station UC-TC (1)
- Tripod camera holder (1)
- USB cable (1)
- A/V connecting cable (1)
- Wrist strap (1)
- “Memory Stick Duo” (32 MB) (1)
- Memory Stick Duo Adaptor (1)
- CD-ROM (USB driver SPVD-012) (1)
- Operating instructions (1)

Design and specifications are subject to change
without notice.

The LCD screen

Page numbers in parentheses indicate the location of additional important information.

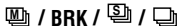
When shooting still images

 60min

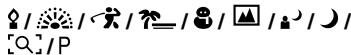
Battery remaining indicator (17)



AE/AF lock indicator (30, 59)

**Recording mode indicator (67, 63, 66)**

White balance indicator (65)



Camera mode indicator (31)



Flash mode indicator (37)



Red-eye reduction indicator (37)

W  T / x1.3 / **S**Qx1.3 / **P**Qx1.3

Zoom scaling indicator (33)



Sharpness indicator (120)



Saturation indicator (120)



Contrast indicator (120)



AF illuminator indicator (38, 124)



Metering mode indicator (62)



Picture effect indicator (68)



Macro indicator (35)

SAF / MAF

AF mode indicator (58)



AF range finder frame indicator (57)

0.5m

Focus preset value (59)

3


 **3M / 3.2 / 3M / 1M / VGA**

Image size indicator (25)

FINE / STD

Image quality indicator (54)



Recording folder indicator (55)



Remaining “Memory Stick” capacity indicator

1/30"

Multi Burst interval indicator (67)

400

Remaining number of recordable images indicator (28)



Self-timer indicator (36)

C:32:00

Self-diagnosis display (118)



Date/time indicator (38)

iso400

ISO number indicator (120)

±0.7EV

Bracket step value indicator (63)

4



Vibration warning indicator (115)



Low battery warning indicator (115)

AF range finder frame (57)

+

Spot metering cross hair (63)

5

Histogram indicator (61)



NR slow shutter indicator (43)

125

Shutter speed indicator

F3.5

Aperture value indicator

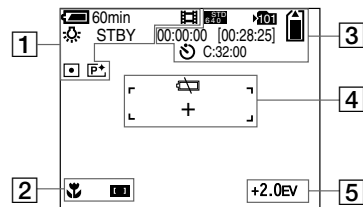
+2.0EV

EV level value indicator (60)

Menu/Guide menu (53)

- Pressing MENU switches the menu/guide menu on/off.

When shooting movies



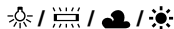
1

60min

Battery remaining indicator (17)



Recording mode indicator (84)



White balance indicator (65)

STBY / REC

Movie shooting indicator (84)

x1.3

Zoom scaling indicator (33)



Metering mode indicator (62)



Picture effect indicator (68)

2



Macro indicator (35)



AF range finder frame indicator (57)

0.5m

Focus preset value (59)

3



Image size indicator (84)



Recording folder indicator (55)



Remaining "Memory Stick" capacity indicator

00:00:00 [00:28:05]

Recording time [maximum recordable time] indicator (119)



Self-timer indicator (36)

C:32:00

Self-diagnosis display (118)

4



Low battery warning indicator (115)

AF range finder frame (57)



Spot metering cross hair (63)

5

+2.0EV

EV level value indicator (60)

Menu/Guide menu (53)

- Pressing MENU switches the menu/guide menu on/off.

☐5M / ☒3:2 / ☐3M / ☐1M / ☐VGA

⏪ / ⏩ / ⏮ ⏭

Qx1.3

Step 12/16

Frame by frame playback indicator
(73)

101-0012
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▶101
Recording folder indicator (55)

 **Remaining “Memory Stick” capacity indicator**

101▶ Playback folder indicator (69)

12/12
Image number/Number of images
recorded in selected folder

C:32:00
Self-diagnosis display (118)

 **Not disconnect USB cable indicator**
(79, 115)

+2.0EV
EV level value indicator (60)

ISO400
ISO number indicator (120)

 **Metering mode indicator** (62)

Flash indicator

⚡WB / ☀️ / ☀️ / ☁️ / ☀️
White balance indicator (65)

500
Shutter speed indicator

F3.5
Aperture value indicator

5

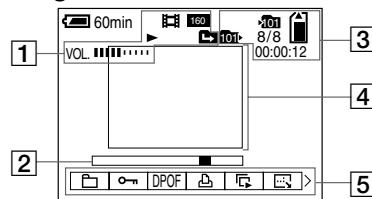
Histogram indicator (61)

Recording date/time of the playback image (38)

Menu/Guide menu (53)

- Pressing MENU switches the menu/guide menu on/off.

When playing back moving images



1



Recording mode indicator (85)

FINE / **STD** / **160**

Image size indicator (85)



Playback / Stop indicator (85)



Change folder indicator (69)

VOL

Volume indicator (85)

2

Playback bar (85)

3



Recording folder indicator (55)



Remaining "Memory Stick" capacity



Playback folder indicator (69)

8/8

Image number/Number of images recorded in selected folder indicator

00:00:12

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4

Playback image (85)

5

Menu/Guide menu (53)

- Pressing MENU switches the menu/guide menu on/off.

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Printed on 100% recycled paper
using VOC (Volatile Organic
Compound)-free vegetable oil
based ink.

<http://www.sony.net/>
Sony Corporation Printed in Japan

Additional information on this product and answers to frequently
asked questions can be found at our Customer Support Website.

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2004.09	Official Release	—	—
1.1	2005.04	Correction-1	Correction of repair parts list S.M. Correction: Page 4	Yes
1.2	2005.09	Correction-2	Correction of supplied accessories S.M. Correction: Page1, 4	Yes

DSC-T33

SERVICE MANUAL

LEVEL 2

Differences Manual

Ver 1.0 2004.11


Revision History

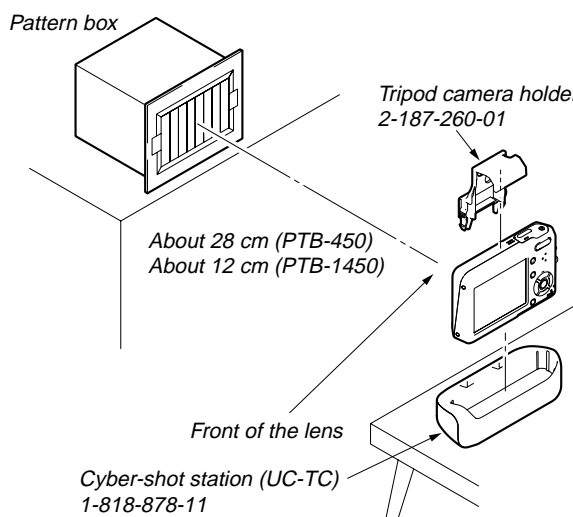
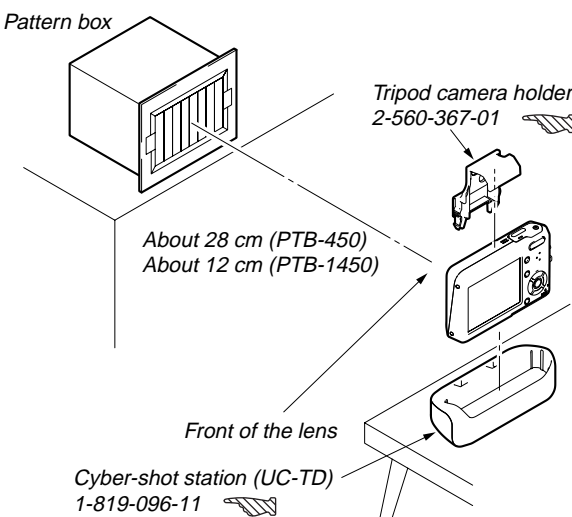


DSC-T33

US Model
Canadian Model
AEP Model
UK Model
E Model
Hong Kong Model
Australian Model
Chinese Model
Japanese Model
Korea Model
Tourist Model

- This Service Manual shows only the difference from DSC-T3.
Refer to the Service Manual Level2 (9-876-764-31) of DSC-T3 also for repair.
- All of the accessories, disassembly procedure, exploded views of the DSC-T33 are shown in this manual.

 : Changed portion.

Page	DSC-T3	DSC-T33
4-5	<p>Pattern box</p>  <p>Tripod camera holder 2-187-260-01</p> <p>About 28 cm (PTB-450) About 12 cm (PTB-1450)</p> <p>Front of the lens</p> <p>Cyber-shot station (UC-TC) 1-818-878-11</p>	<p>Pattern box</p>  <p>Tripod camera holder 2-560-367-01</p> <p>About 28 cm (PTB-450) About 12 cm (PTB-1450)</p> <p>Front of the lens</p> <p>Cyber-shot station (UC-TD) 1-819-096-11</p>

SONY®



SPECIFICATIONS

■ Camera

[System]

Image device

7.66 mm (1/2.4 type) color CCD
Primary color filter

Total pixels number of camera

Approx. 5 255 000 pixels

Effective pixels number of camera

Approx. 5 090 000 pixels

Lens

Carl Zeiss Vario-Tessar
3× zoom lens
f = 6.7 – 20.1 mm (38 – 114 mm
when converted to a 35 mm still
camera)
F3.5 – 4.4

Exposure control

Automatic exposure, Scene selection
(9 modes)

White balance

Automatic, Daylight, Cloudy,
Fluorescent, Incandescent, Flash

File format (DCF compliant)

Still images: Exif Ver. 2.2 JPEG
compliant, DPOF compatible
Movies: MPEG1 compliant
(Monaural)

Recording media

“Memory Stick Duo”

Flash

Recommended distance (ISO set to
Auto):
DSC-T3
0.1 m to 1.7 m (4 inches to 5 feet
6 7/8 inches) (W)
0.5 m to 1.6 m (1 foot 7 3/4 inches to
5 feet 2 7/8 inches) (T)
DSC-T33
0.1 m to 1.6 m (4 inches to 5 feet
2 7/8 inches) (W)
0.5 m to 1.5 m (1 foot 7 3/4 inches to
4 feet 11 inches) (T)

[Input and Output connectors]

Multi connector

USB communication

Hi-Speed USB (USB 2.0 compliant)

[LCD screen]

LCD panel

6.2 cm (2.5 type) TFT drive

Total number of dots

230 400 (960×240) dots

[Power, general]

Used battery pack

NP-FT1

Power requirements

3.6 V

Power consumption (during shooting)

1.4 W

Operating temperature

0°C to +40°C (+32°F to +104°F)

Storage temperature

–20°C to +60°C (–4°F to +140°F)

Dimensions

DSC-T3

Approx. 91×60×17.8 mm
(3 5/8×2 3/8×23/32 inches)

DSC-T33

Approx. 99.4×60.9×20.7 mm
(4×2 2/1×27/32 inches)
(W/H/D, excluding maximum
protrusions)

Mass

DSC-T3

Approx. 171 g (6.0 oz)

DSC-T33

Approx. 150 g (5.3 oz)
(including battery pack NP-FT1,
“Memory Stick Duo” and wrist
strap)

Microphone

Electret condenser microphone

Speaker

Dynamic speaker

Exif Print

Compatible

PRINT Image Matching II

Compatible

PictBridge

Compatible

■ UC-TC/UC-TD Cyber-shot Station

[Input and Output connectors]

A/V OUT (MONO) jack (Monaural)

Minijack

Video: 1 Vp-p, 75 Ω, unbalanced,
sync negative

Audio: 327 mV (at a 47 kΩ load)
Output impedance 1 kΩ

USB jack B

USB connection

Hi-Speed USB
(USB 2.0 High-Speed compatible)

DC IN jack

Camera connector

■ AC-LM5/LM5A AC Adaptor

Input rating

100 V to 240 V AC, 50/60 Hz

AC-LM5

10 W

AC-LM5A

11 W

Output rating

4.2 V DC, 1.5 A

Operating temperature

0°C to +40°C (+32°F to +104°F)

Storage temperature

–20°C to +60°C (–4°F to +140°F)

Dimensions

AC-LM5

Approx. 47×30×80 mm
(1 7/8×1 3/16×3 1/4 inches)

AC-LM5A

Approx. 48×29×81 mm
(1 15/16×1 3/16×3 1/4 inches)
(W/H/D, excluding projecting parts)

Mass

AC-LM5

Approx. 170 g (6.0 oz)

AC-LM5A

Approx. 160 g (5.6 oz)
excluding power cord (mains lead)

■ NP-FT1 battery pack

Used battery

Lithium-ion battery

Maximum voltage

DC 4.2 V

Nominal voltage

DC 3.6 V

Capacity

2.4 Wh (680 mAh)

■ Accessories



- AC-LM5/LM5A AC Adaptor (1)
- Power cord (mains lead) (1)
- NP-FT1 battery pack (1)
- Cyber-shot Station (1)
UC-TC (DSC-T3)/UC-TD (DSC-T33)
- Camera holder for tripod (1)
- USB cable (1)
- A/V connecting cable (1)
- Wrist strap (1)
- “Memory Stick Duo” (32 MB) (1)
- Memory Stick Duo Adaptor (1)
- CD-ROM (USB driver SPVD-012) (1)
- Operating instructions (1)

Design and specifications are subject to change
without notice.

CAUTION :

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

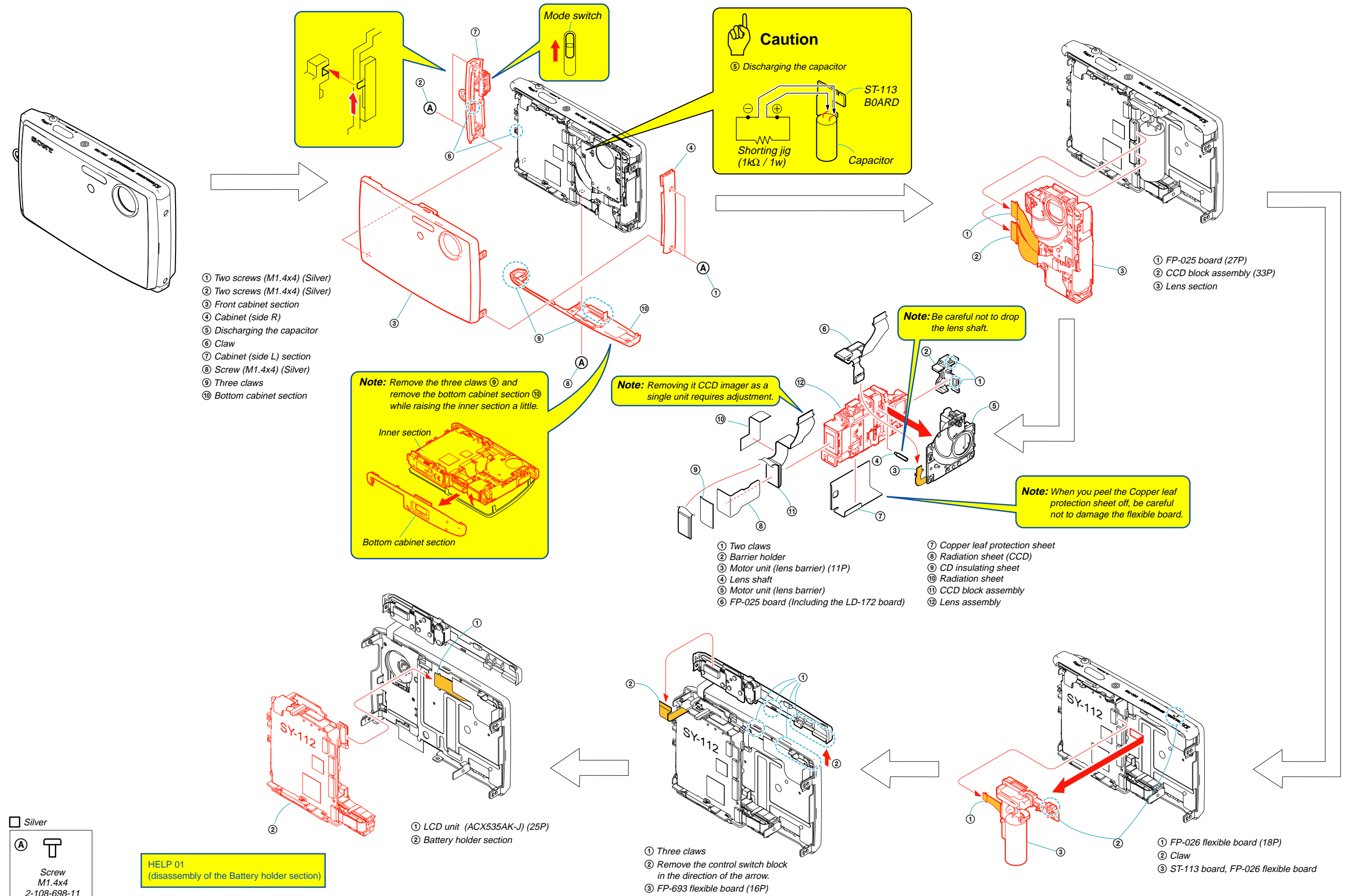
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH
MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS
LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE
COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS
APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS
PUBLISHED BY SONY.

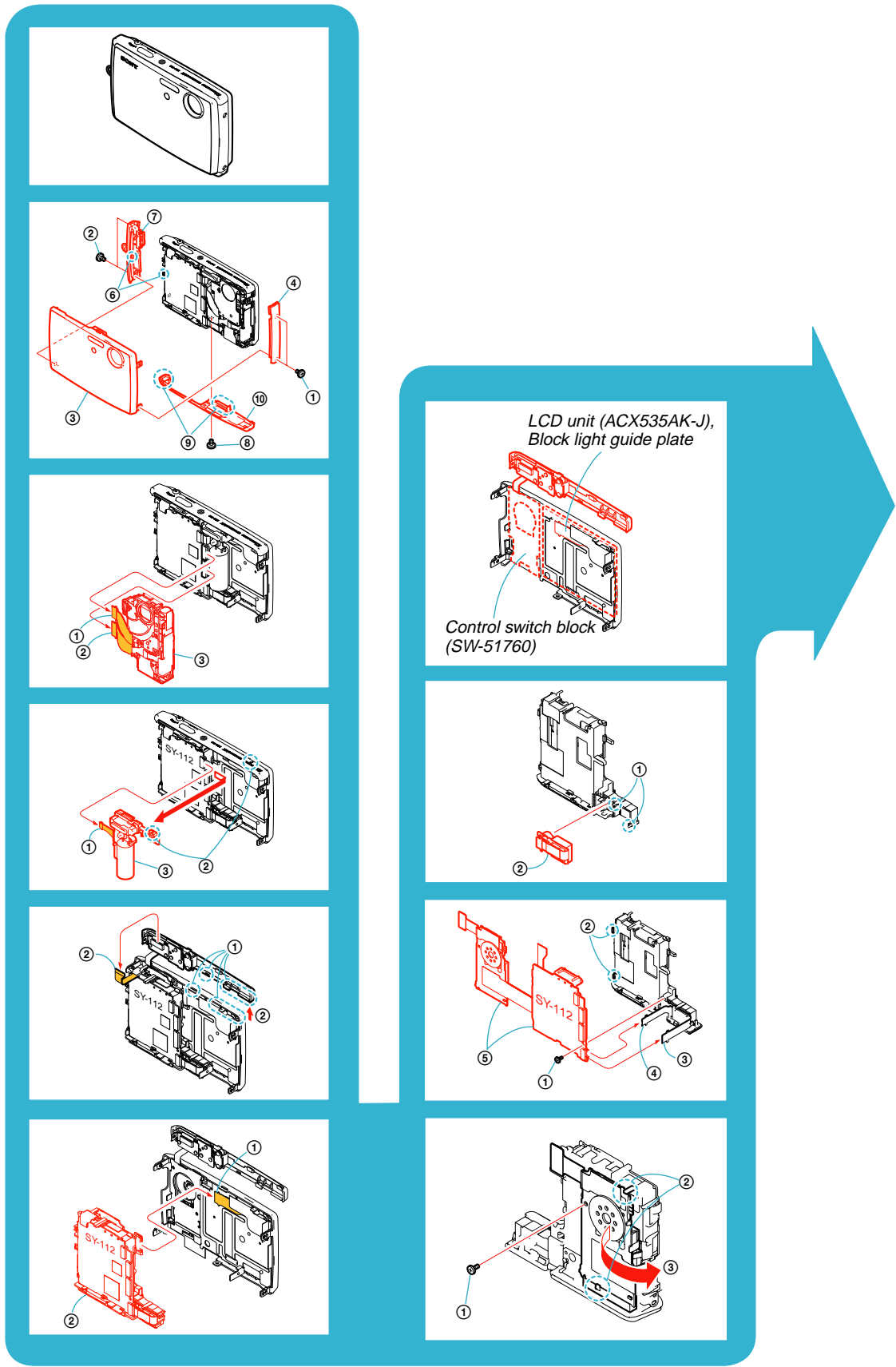
2. DISASSEMBLY

The following flow chart shows the disassembly procedure.

2-1. DISASSEMBLY

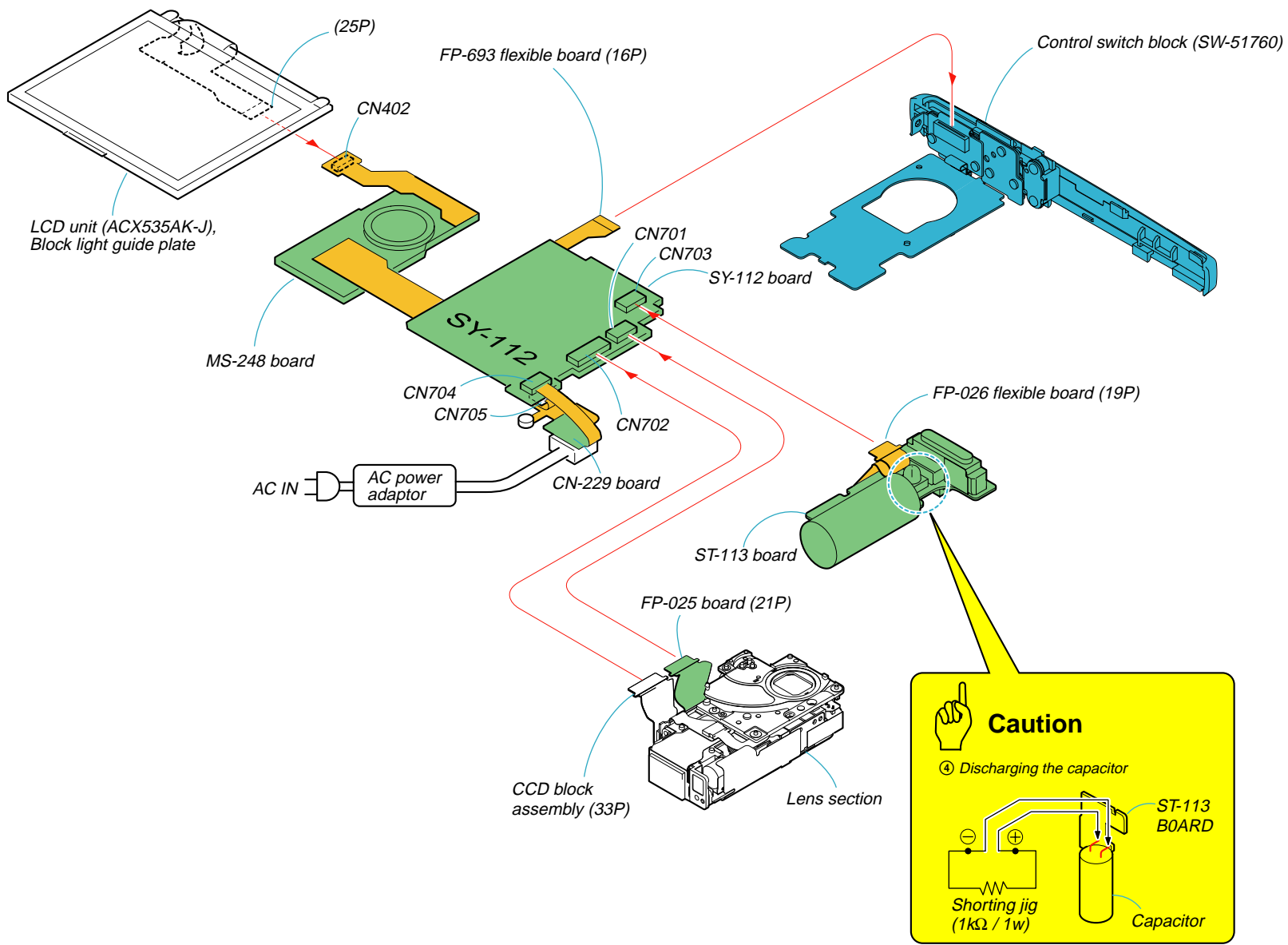


2-2. SERVICE POSITION

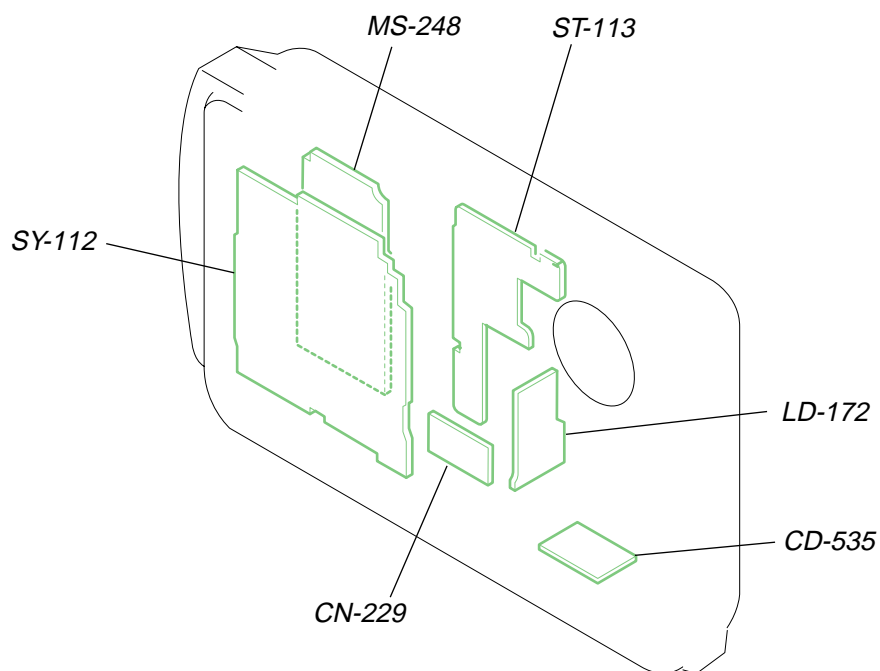


[SERVICE POSITION TO CHECK THE SY-112 BOARD]

Note1: When checking the VIDEO AMP (SY-112 board IC302) or the USB circuit, connect the cradle.



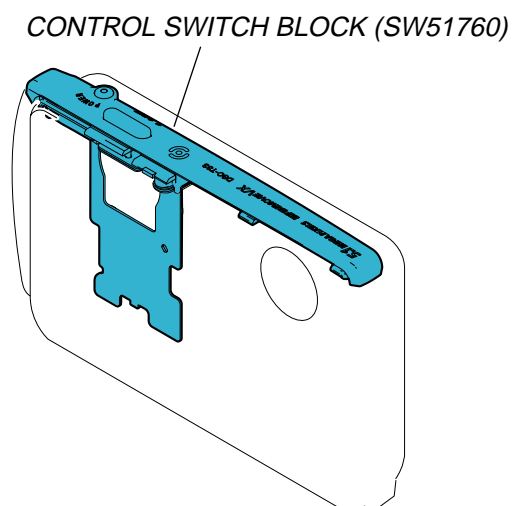
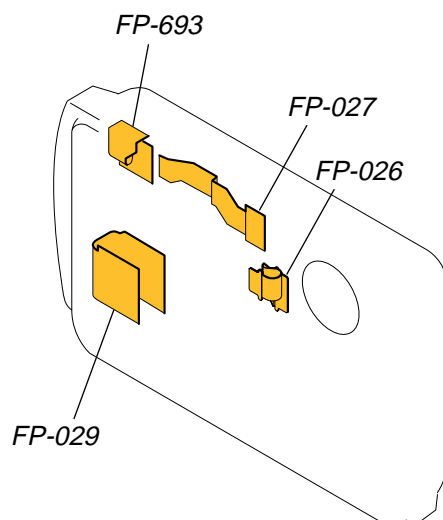
2-3. CIRCUIT BOARDS LOCATION



NAME	FUNCTION
<i>CD-535</i>	<i>CCD IMAGER</i>
<i>CN-229</i>	<i>MULTI CONNECTOR</i>
<i>LD-172</i>	<i>LENS DRIVE</i>
<i>MS-248</i>	<i>MS I/O, LCD PANEL DRIVE</i>
<i>ST-113</i>	<i>FLASH</i>
<i>SY-112</i>	<i>CAMERA A/D CONVERTER, TIMING GENERATOR, CAMERA DSP, LENS CONTROL, CAMERA SYSTEM CONTROL, HI CONTROL, AUDIO I/O, FLASH DRIVE, DC/DC CONVERTER, CONNECTOR</i>

2-4. FLEXIBLE BOARDS LOCATION

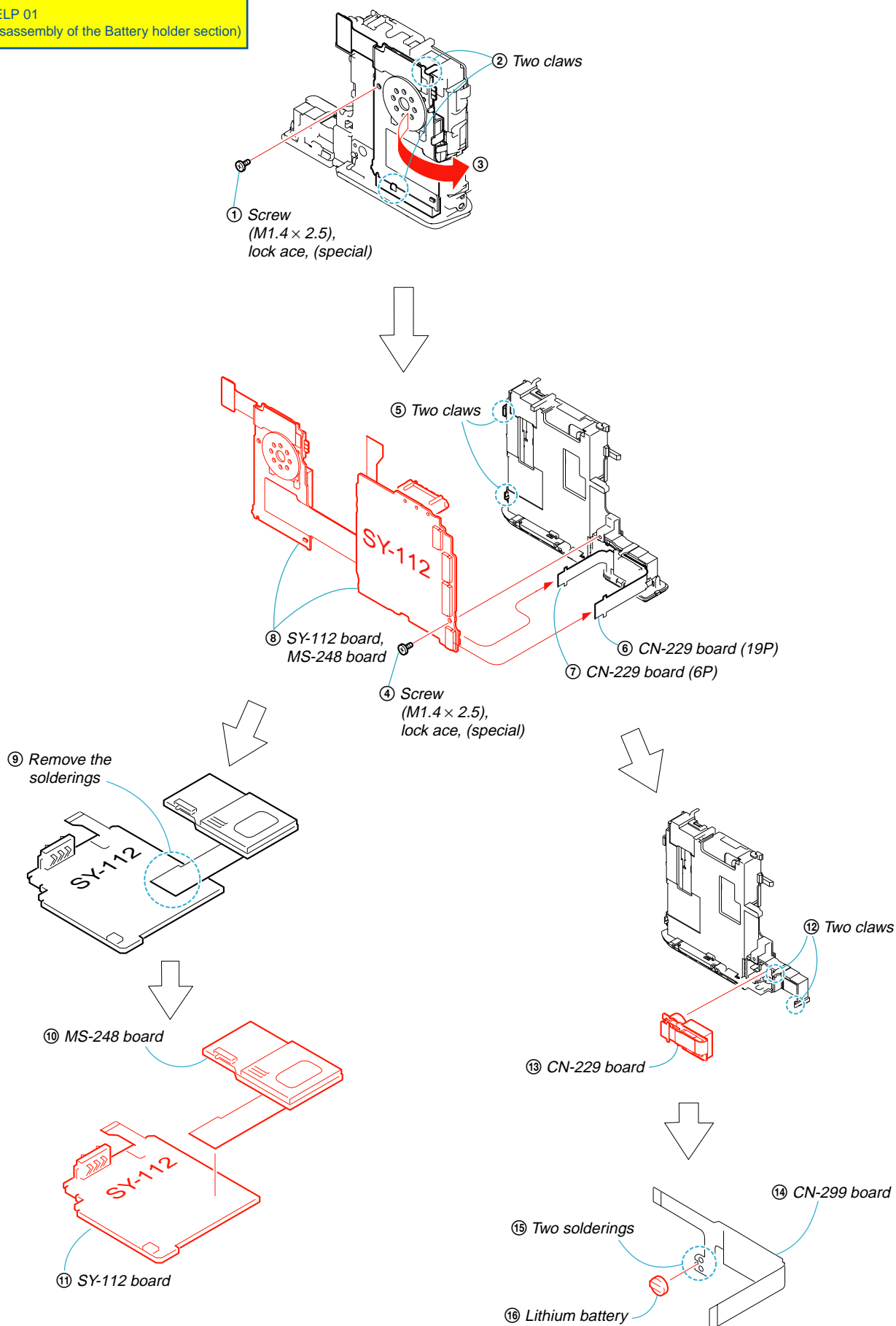
The flexible boards contained in the lens block is not shown.



HELP

Sheet attachment positions and procedures of processing the flexible boards/harnesses are shown.

HELP 01 (disassembly of the Battery holder section)

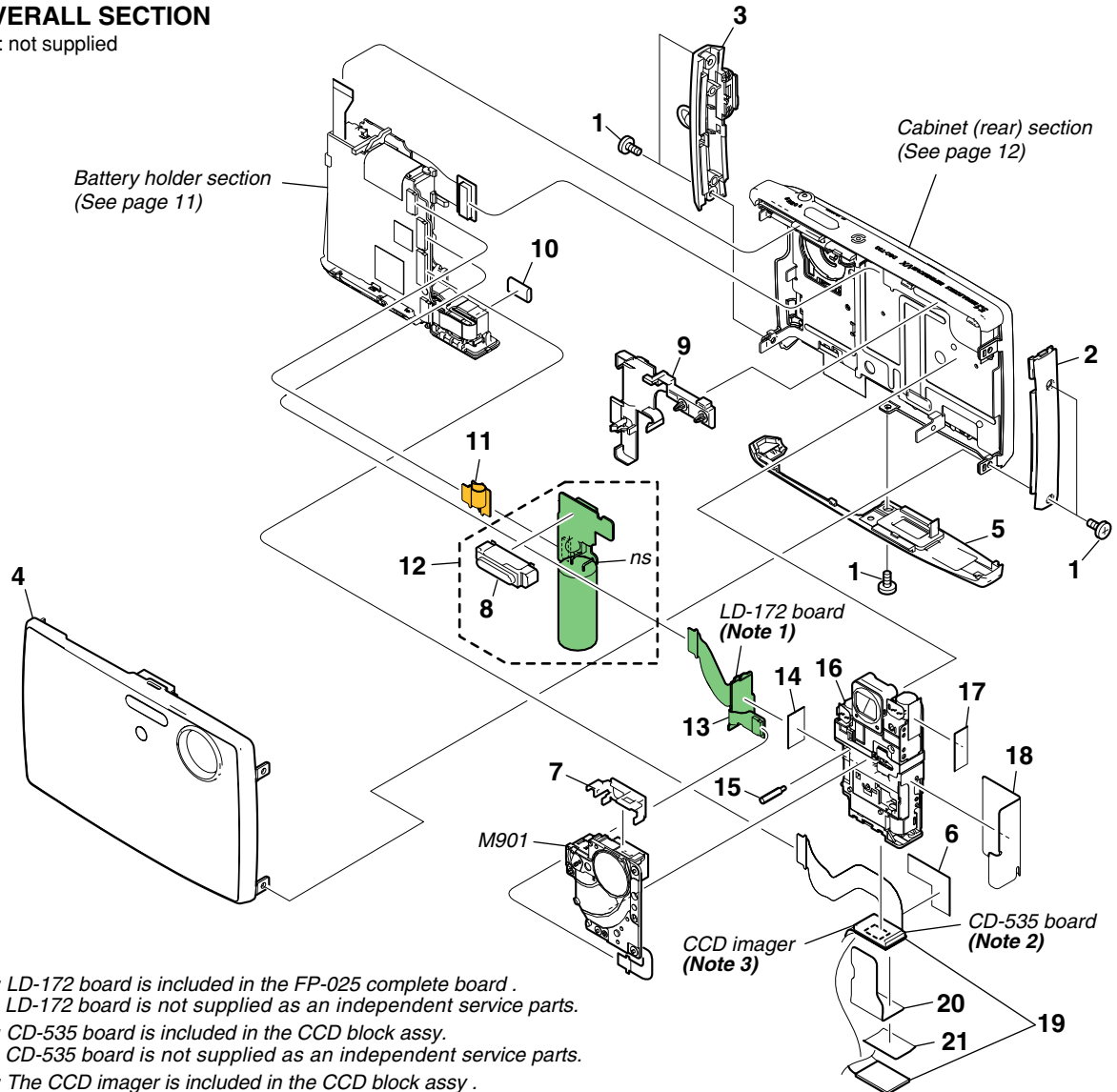


5. REPAIR PARTS LIST

5-1. EXPLODED VIEWS

5-1-1. OVERALL SECTION

ns : not supplied



Note 1: LD-172 board is included in the FP-025 complete board .
LD-172 board is not supplied as an independent service parts.

Note 2: CD-535 board is included in the CCD block assy.
CD-535 board is not supplied as an independent service parts.

Note 3: The CCD imager is included in the CCD block assy .
The CCD imager is not supplied as a single unit since removing it as a single unit requires adjustment.

Be sure to read "Precautions upon replacing CCD imager" on page 4-5 of Level 3 of DSC-T3 when changing the CCD imager.

Ref. No.	Part No.	Description
1	2-108-698-11	SCREW (M1.4)
2	2-560-322-01	CABINET (SIDE R) (760)
3	X-2048-558-1	CABINET (SIDE L) (760) ASSY
4	A-1092-523-A	SUB BLOCK ASSY, (FRONT CR)(GOLD)
4	A-1092-524-A	SUB BLOCK ASSY, (FRONT CR)(BLUE)
4	A-1098-364-A	SUB BLOCK ASSY, (FRONT CR)(BROWN)
4	A-1092-486-A	SUB BLOCK ASSY, (FRONT S)(WHITE)
5	2-582-859-01	BOTTOM (760), CABINET
6	2-587-869-01	SHEET (760), RADIATION
7	2-186-647-01	HOLDER, BARRIER
△ 8	1-478-972-11	FLASH UNIT
9	2-560-321-01	COVER (760), ST TERMINAL

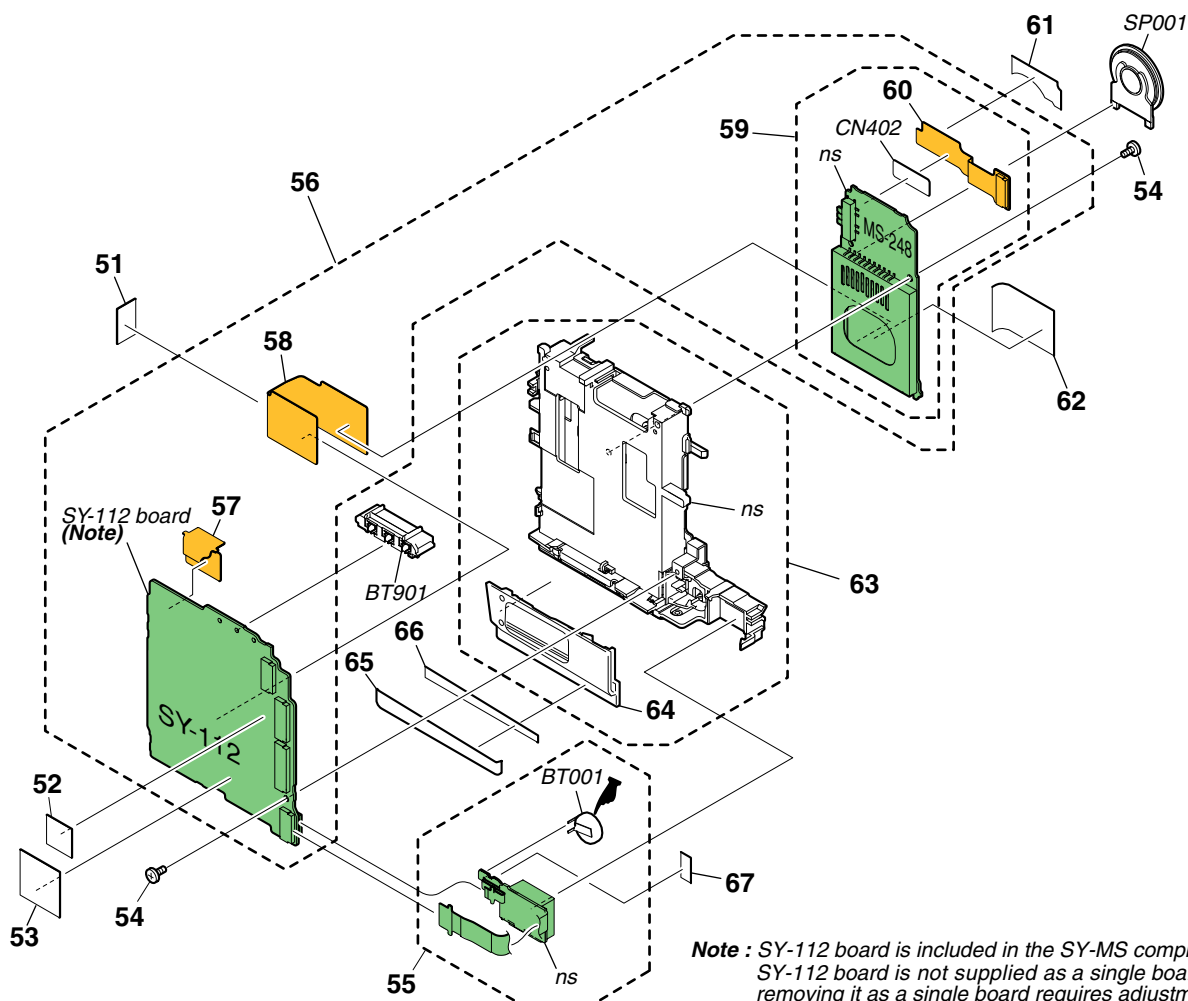
Ref. No.	Part No.	Description
10	3-087-670-01	GASKET (K)
11	1-862-981-11	FP-026 FLEXIBLE BOARD
12	A-1075-328-A	ST-113 BOARD, COMPLETE
13	A-1075-333-A	FP-025 BOARD, COMPLETE
14	3-086-237-01	SHEET (LD), ADHESIVE
15	2-186-646-01	SHAFT, LENS
16	A-1082-228-A	LENS ASSY (SERVICE USE)
17	3-089-781-01	SHEET (MOTOR), PROTECTION
18	2-186-593-01	SHEET, COPPER LEAF PROTECTION
19	A-1075-408-A	CCD BLOCK ASSY
20	3-086-236-01	SHEET (CCD), RADIATION
21	2-348-420-01	SHEET, CD INSULATING
M901	1-787-218-31	MOTOR UNIT (LENS BARRIER)

Note :
The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.


Note :
Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

5-1-2. BATTERY HOLDER SECTION

ns : not supplied



Note : SY-112 board is included in the SY-MS complete board .
SY-112 board is not supplied as a single board since
removing it as a single board requires adjustment.

 : BT001 (Lithium battery) CN-229 board on the mount position.
(See page 4-44 of level2 of DSC-T3)

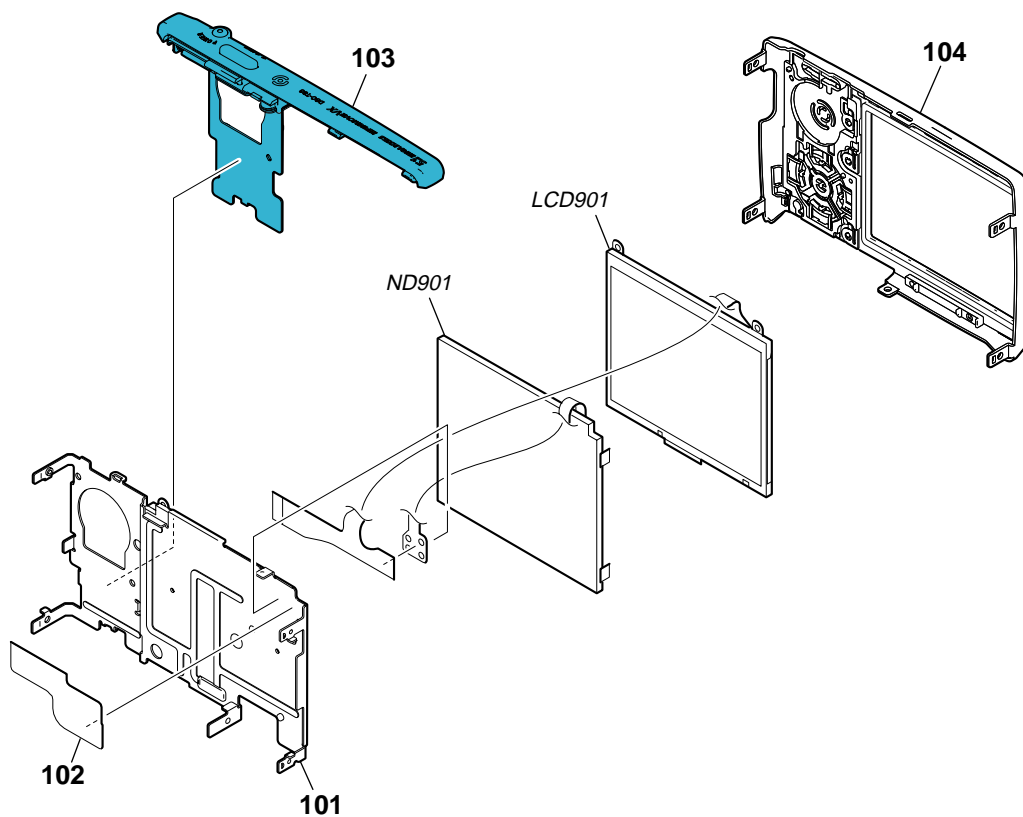
Ref. No.	Part No.	Description
51	2-589-335-01	SHEET (MK), RADIATION
52	3-089-985-01	SHEET
53	2-348-417-01	SHEET (MY), RADIATION
54	3-086-218-01	SCREW (M1.4), LOCK ASE, SPECIAL
55	A-1075-329-A	CN-229 BOARD, COMPLETE
56	A-1099-024-A	SY-MS BOARD, COMPLETE (SERVICE) (J)
56	A-1099-025-A	SY-MS BOARD, COMPLETE (SERVICE) (EXCEPT J)
57	1-860-517-13	FP-693 FLEXIBLE BOARD
58	1-862-984-11	FP-029 FLEXIBLE BOARD
59	A-1075-331-A	MS-248 BOARD, COMPLETE
60	1-862-982-11	FP-027 FLEXIBLE BOARD
61	2-186-609-01	MS PRTECTION SHEET (S)
62	2-588-056-01	SHEET (L) (760), MS PROTECTION

Ref. No.	Part No.	Description
63	X-2048-556-1	HOLDER (760) ASSY, BT
64	2-560-326-01	LID (760), BT
65	2-560-323-01	COVER (760), BT LID (GOLD)
65	2-560-323-11	COVER (760), BT LID (BLUE)
65	2-560-323-21	COVER (760), BT LID (WHITE)
65	2-560-323-31	COVER (760), BT LID (BROWN)
66	2-560-327-01	SHEET (BT) (760), ADHESIVE
67	2-548-224-01	SHEET (CN), INSULATING
△ BT001	1-528-999-51	BATTERY, LITHIUM SECONDARY
BT901	1-780-061-11	BATTERY TERMINAL BOARD
CN402	1-817-828-11	CONNECTOR, FPC (ZIF) 25P
SP001	1-825-983-11	LOUDSPEAKER (1.62CM)

Note :
The components identified by
mark △ or dotted line with mark
△ are critical for safety.
Replace only with part number
specified.

Note :
Les composants identifiés par
une marque △ sont critiques
pour la sécurité.
Ne les remplacer que par une
pièce portant le numéro spécifié.

5-1-3. CABINET (REAR) SECTION

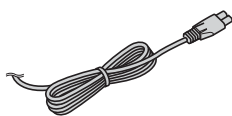


Ref. No.	Part No.	Description
101	2-560-340-01	FRAME (760), LCD
102	3-086-279-01	TAPE (LCD)
103	1-479-196-11	SWITCH BLOCK, CONTROL (SW51760)
104	A-1092-526-A	SUB BLOCK ASSY, (REAR CR)(GOLD)
104	A-1092-527-A	SUB BLOCK ASSY, (REAR CR)(BLUE)

Ref. No.	Part No.	Description
104	A-1098-365-A	SUB BLOCK ASSY, (REAR CR)(BROWN)
104	A-1092-495-A	SUB BLOCK ASSY, (REAR S) (WHITE)
LCD901	8-753-220-18	ACX535AK-J
ND901	1-478-882-11	BLOCK, LIGHT GUIDE PLATE (2.5)

Checking supplied accessories.

Make sure that the following accessories are supplied with your camcorder.



Power cord (Main lead) (1)
(AEP model)

▲ 1-823-946-12

Power cord (Main lead) (1)
(E model)

▲ 1-769-608-12

Power cord (Main lead) (1)
(KR model)

▲ 1-823-947-12

Power cord (Main lead) (1)
(UK, HK model)

▲ 1-783-374-12

Power cord (Main lead) (1)
(US, CND model)

▲ 1-790-107-22

Power cord (Main lead) (1)
(CH, JE model)

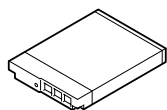
▲ 1-790-732-12

Power cord (Main lead) (1)
(J model)

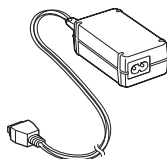
▲ 1-791-637-13

Power cord (Main lead) (1)
(AUS model)

▲ 1-827-945-12



NP-FT1 battery pack (1)
(not supplied)



AC-LM5/LM5A AC Adaptor (1)

▲ 1-477-730-61



CD-ROM

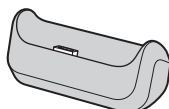
(USB Driver SPVD-012.1 (CL)) (1)
(US, CND, J model)

2-187-477-01

CD-ROM

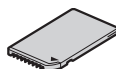
(USB Driver SPVD-012.1 (C)) (1)
(EXCEPT: US, CND, J model)

2-187-478-01



Cyber-shot station (UC-TD) (1)

1-819-096-11

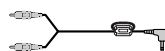


"Memory Stick Duo" (32MB) (1)
(not supplied)



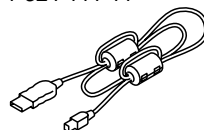
Tripod camera holder (1)

2-560-367-01



A/V connecting cable (1)

1-824-111-11



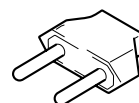
USB cable (1)

1-827-754-11



Wrist strap (1)

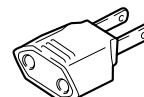
2-050-981-01



2-pin conversion adaptor (1)

(JE model)

1-569-007-12



2-pin conversion adaptor (1)

(E model)

1-569-008-12

• Abbreviation

- CND : Canadian model
- AUS : Australian model
- CH : Chinese model
- HK : Hong Kong model
- KR : Korea model
- JE : Tourist model
- J : Japanese model

Other accessories

- 2-548-269-01 MANUAL, INSTRUCTION (JAPANESE)(J)
2-548-269-11 MANUAL, INSTRUCTION
(ENGLISH)(US, CND, AEP, E, JE, UK, AUS, HK)
2-548-269-21 MANUAL, INSTRUCTION (FRENCH/ITALIAN)(CND, AEP)
2-548-269-31 MANUAL, INSTRUCTION
(SPANISH/PORTUGUESE)(AEP, E, JE)
2-548-269-41 MANUAL, INSTRUCTION (GERMAN/DUTCH)(AEP)

- 2-548-269-51 MANUAL, INSTRUCTION
(CHINESE(SIMPLIFIED/TRADITIONAL))(E, HK, JE)
2-548-269-61 MANUAL, INSTRUCTION (RUSSIAN/SWEDISH)(AEP)
2-548-269-71 MANUAL, INSTRUCTION (ARABIC/PERSIAN)(E)
2-548-269-81 MANUAL, INSTRUCTION (KOREAN)(JE, KR)
2-548-269-91 MANUAL, INSTRUCTION (POLISH/CZECH)(AEP)

2-548-272-11 MANUAL, INSTRUCTION (HUNGARIAN/SLOVAK)(AEP)
2-548-274-01 MANUAL, INSTRUCTION (JAPANESE)(J)

Note :

The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

Note :

Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2004.11	Official Release	—	—